THIRD SERIES VOL 58 NUMBER 9 JULY 1951

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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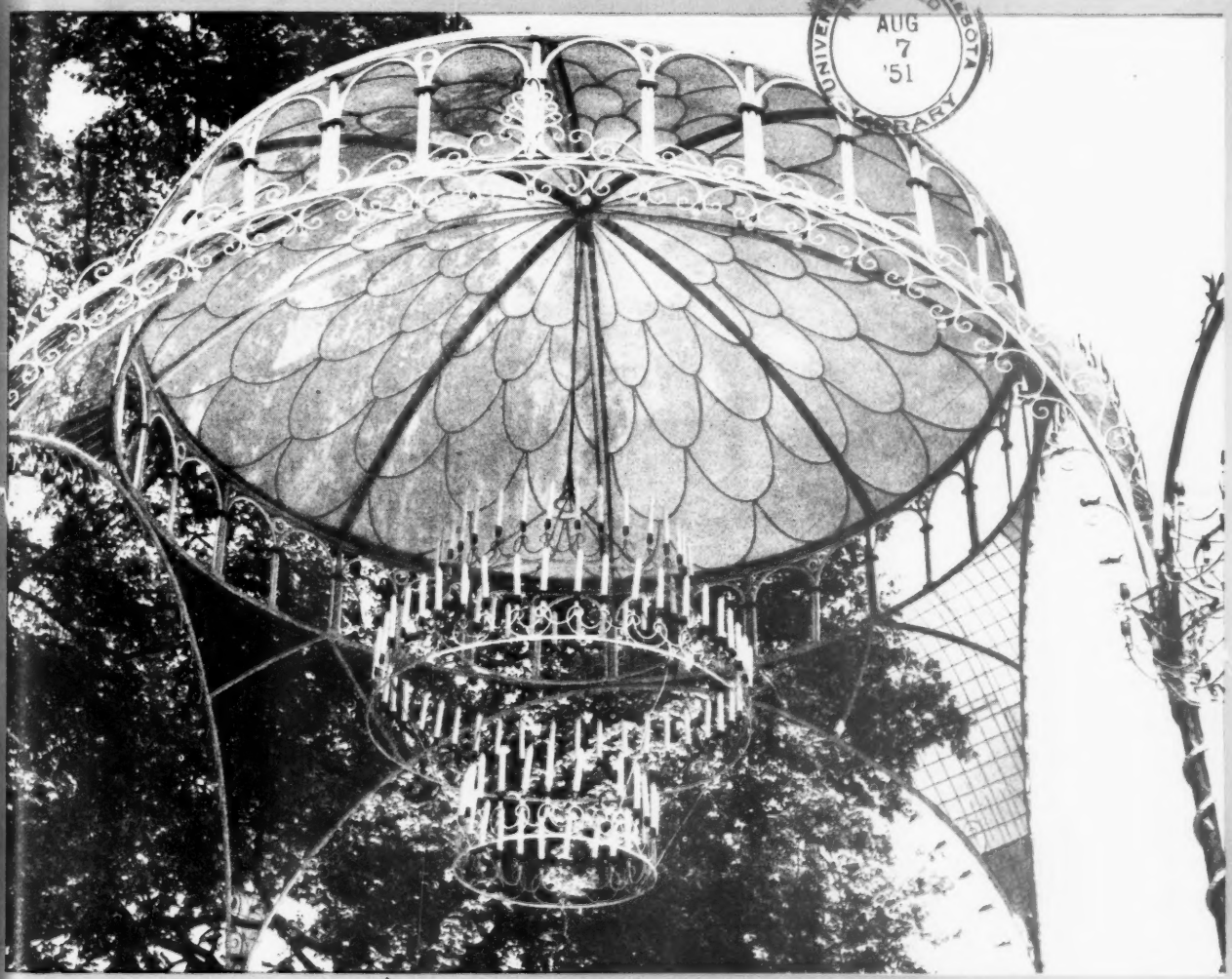

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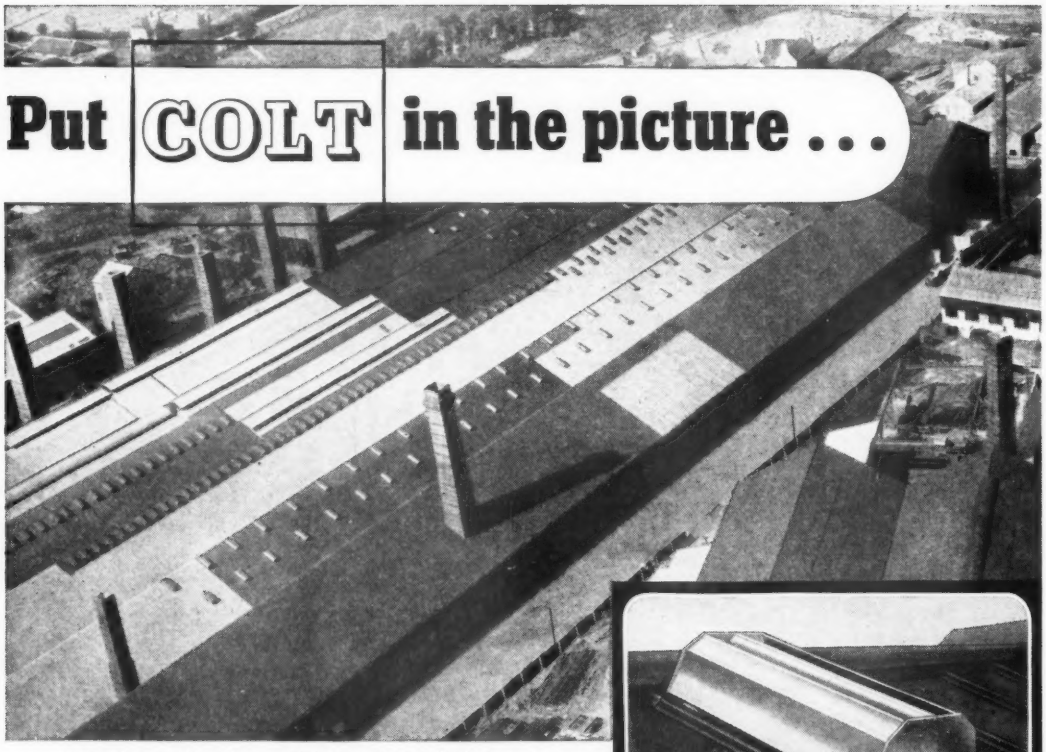

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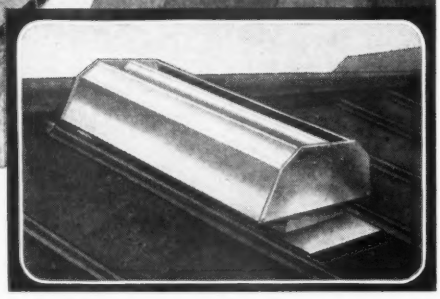

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Annual Election Results

Report to the Chairman of the General Meeting, 19 June 1951

The Scrutineers appointed to count the votes for the election of the Council for the Session 1951-52 *beg to report as follows :*

3770 *envelopes were received—*749 *from Fellows,* 2,391 *from Associates, and* 630 *from Licentiates.*

The result of the election is as follows:

COUNCIL, 1951-52

President

ANDREW GRAHAM HENDERSON (Glasgow) (unopposed)

Past-Presidents

HARRY STUART GOODHART-RENDEL (unopposed)
MICHAEL THEODORE WATERHOUSE (unopposed)

Members of Council

Elected		*Votes*
1.	HUGH MAXWELL CASSON	2,105
2.	FRANCIS REGINALD STEVENS YORKE	2,016
3.	JOHN MURRAY EASTON	1,900
4.	LEONARD CECIL HOWITT	1,727
5.	HUBERT BENNETT	1,309
6.	STEPHEN ROWLAND PIERCE	1,133

Not Elected		*Votes*
7.	SIDNEY HAROLD LOWETH	1,012
8.	STANLEY WAYMAN MILBURN	990
9.	JOHN LEOPOLD DENMAN	932
10.	FRANKLYN LESLIE HALLIDAY	840
11.	THOMAS EDWARD SCOTT	766
12.	FREDERICK CHARLES SAXON	713
13.	JOHN SWARBRICK	708
14.	FRANK REGINALD STEELE	668
15.	HERBERT JACKSON	637
16.	EDMUND DOUGLASS JEFFERISS MATHEWS	608
17.	CYRIL FRANCIS WILLIAM HASELDINE	601
18.	ALBERT NEWTON THORPE	599
19.	WALTER WILLIAM FISK	359
20.	ALWYN BRUNOW WATERS	279
21.	MAURICE HOWARD FORWARD	258
22.	TERENCE ERNEST HEYSHAM	97

3,765 Voting Papers were received of which 6 were invalid.

Associate Members of the Council

Elected		*Votes*
1.	RALPH TUBBS	2,465
2.	HENRY THOMAS CADBURY-BROWN	1,734
3.	JOHN LEWIS WOMERSLEY	1,515

Not Elected		*Votes*
4.	JOSEPH LEA GLEAVE	1,387
5.	SIDNEY EDWARD THOMAS CUSDIN	1,201
6.	FREDERICK FRANCIS CHARLES CURTIS	1,043
7.	BRIG. HAROLD EDWARD MOORE	576

3,686 Voting Papers were received of which 5 were invalid.

Licentiate Member of Council

Elected		*Votes*
1.	STANLEY VINCENT GOODMAN	1,001

Not Elected		*Votes*
2.	LEWIS JAMES FREMEN GOMME	971
3.	PERCY HERBERT GRUNDY	811

2,784 Voting Papers were received of which 1 was invalid.

Representatives of Allied Societies in the United Kingdom or the Irish Free State

(1) *Six Representatives from the Northern Province of England*

PHILIP CLIVE NEWCOMBE [*F*] (Northern Architectural Association)
WILLIAM CECIL YOUNG [*F*] (Manchester Society of Architects)
FRANCIS JAMES MASSEY ORMROD [*F*] (Liverpool Architectural Society)
COLIN ROWNTREE [*F*] (York and East Yorkshire Architectural Society)
CHARLES EDWARD HORSFALL [*L*] (West Yorkshire Society of Architects)
ROBERT CAWKWELL [*F*] (Sheffield, South Yorkshire and District Society of Architects and Surveyors)

(2) *Five Representatives from the Midland Province of England*

GEORGE BERNARD COX [*F*] (Birmingham and Five Counties Architectural Association)

ANTHONY EDMUND HERBERT [*A*] (Leicestershire and Rutland Society of Architects)

PETER BROWNING DUNHAM [*F*] (Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects)

THOMAS NELSON CARTWRIGHT [*F*] (Nottingham, Derby and Lincoln Architectural Society)

ERIC CHARLES ROTHWELL SANDON [*A*] (East Anglian Society of Architects)

(3) *Six Representatives from the Southern Province of England*

JOHN ARDERN POWELL [*F*] (Devon and Cornwall Architectural Society)

LIEUT.-COL. ERIC COLE [*F*] (Wessex Society of Architects)

FRED ALLARD CHARLES MAUNDER [*F*] (Berks, Bucks and Oxon Architectural Association)

ROBIN AUDREY THOMAS [*F*] (Hampshire and Isle of Wight Architectural Association)

DAVID FRANCIS LUMLEY [*A*] (Essex, Cambridge and Hertfordshire Society of Architects)

One representative to be nominated by the South-Eastern Society of Architects.

(4) *Four Representatives of Allied Societies in Scotland nominated by the Council of the Royal Incorporation of Architects in Scotland*

THOMAS SMITH CORDINER [*F*] (Glasgow)

LIEUT.-COL. ALEXANDER CULLEN [*F*] (Inverness)

LOCKHART WHITEFORD HUTSON [*F*] (Hamilton)

WILLIAM HARDIE KININMONTH [*F*] (Edinburgh)

(5) *One Representative of Allied Societies in Wales*

JOHN WILLIAM BISHOP [*A*] (South Wales Institute of Architects)

(6) *Two Representatives of Allied Societies in Ireland*

FRANCIS McARDLE [*F*] (Royal Institute of the Architects of Ireland)

ROBERT HANNA GIBSON [*F*] (Royal Society of Ulster Architects)

Representatives of Societies in Alliance with the Royal Institute Overseas

ALBERT JAMES HAZELGROVE [*F*] (The Royal Architectural Institute of Canada)

L. SYLVESTER SULLIVAN [*F*] (Representative in the United Kingdom)

JACK DENYER CHEESMAN [*F*] (The Royal Australian Institute of Architects)

THOMAS CECIL HOWITT [*F*] (Representative in the United Kingdom)

MALCOLM KEITH DRAFFIN [*F*] (The New Zealand Institute of Architects)

REGINALD HAROLD UREN [*A*] (Representative in the United Kingdom)

To be nominated (Institute of South African Architects)
To be nominated (Representative in the United Kingdom)
To be nominated (The Indian Institute of Architects)
To be nominated (Representative in the United Kingdom)

Representative of the Architectural Association (London)

ALEXANDER ROBERT FORDYCE ANDERSON [*F*]

Representative of the Association of Architects, Surveyors and Technical Assistants (now the Association of Building Technicians)

KENNETH JOHN CAMPBELL [*A*]

Chairman of the Board of Architectural Education

KENNETH MERVYN BASKERVILLE CROSS [*F*]

Chairman of the R.I.B.A. Registration Committee

DENIS POULTON [*F*]

Two Representatives of the R.I.B.A. Salaried and Official Architects' Committee

To be appointed.

Chairman of the R.I.B.A. Allied Societies' Conference

NORVAL ROWALLAN PAXTON [*F*] (Leeds)

Election of Two Honorary Auditors

ROBERT O. FOSTER [*F*]

CHARLES SYKES [*F*]

Scrutineers

ERNEST G. ALLEN, *Chairman*	ARTHUR J. NORCLIFFE
MICHAEL A. J. FAREY	CHARLES SYKES
C. J. EPRIL	L. ISRAEL
F. L. HYETT	C. M. VINE
R. W. HURST	D. S. PEARCE
E. TOM SARGENT	NORMAN RIX
JAMES C. KENNEDY	GORDON PEARSON
JOHN A. WHITTAKER	RICHARD BETHAM
F. STEVEN ALEXANDER	N. A. ROYCE
D. L. TATNALL	L. A. BUTTERFIELD

14 June 1951

More Names from the Birthday Honours List

C.B.E. William David Marshall, Regional Director, Manchester, Ministry of Works.

O.B.E. Patrick Lawrence Hughes [*L*], Regional Controller, North Western Region, Ministry of Local Government and Planning.

Award of the London Architecture Bronze Medal

The Jury entrusted by the Royal Institute of British Architects with the award of the London Architecture Bronze Medal have made their award for the period of three years ending 31 December, 1950, in favour of the Westminster City Council's Housing Scheme at Pimlico, of which two blocks of flats were completed during 1950. The scheme was designed by Messrs. A. J. P. Powell and J. H. Moya [*A*/*A*].

Builders' Tenders

Through the medium of the Joint Consultative Committee of Architects and Builders, discussions have been held between the R.I.B.A. and the N.F.B.T.E. in regard to the practice of builders submitting 'complimentary' tenders. It appears that in many instances contractors, not wishing to tender for a particular job, nevertheless send in tenders adjusted so as not to be accepted through fear that failure to tender when invited will prejudice their chances of an invitation in the future. It was also suggested that this practice was in part due to the fact that architects frequently did not give builders sufficient time to prepare their tenders on a responsible competitive basis.

This question has been submitted to the Council, who consider that steps should be taken to avoid the waste of time and labour involved in this practice.

Members are urged to send out preliminary enquiries to their selected builders at an early stage, asking them if they wish to tender for a particular contract and at the same time making it clear that declining to do so on reasonable grounds will not prejudice their future chances.

On this understanding the N.F.B.T.E. are undertaking consideration of means of discontinuing the practice of submitting 'complimentary' tenders.

Appointment to Royal Fine Art Commission

The Hon. Lionel Brett [*A*] has been appointed a member of the Royal Fine Art Commission.

'Living Traditions' Exhibition

Mr. R. S. Morton, A.M.T.P.I. [*A*], writes: 'The 1951 Festival Exhibition of Scottish Architecture and Crafts at the Royal Scottish Museum, Edinburgh is a wholly Scottish show. It has been organized by the Scottish Committee of the Council of Industrial Design with the help of a panel of architects, the new Scottish Crafts Centre and a committee under the Director of the Royal Scottish Museum, in its three aspects of architecture, traditional crafts and present-day crafts.

'The subject is stirring. Robust and exquisite pieces from the great houses of Scotland, private connoisseurs and museums make the display the most remarkable and valuable ever assembled in this field. Silver, weapons, lace and fine clothes, woodwork and furniture, delicate glass engraving, clocks, tapestries and tweeds—it is a feast for the discriminating palate, and the Scotsman as well as the guest will be inspirited by the old and the contemporary skills.

'The layout is divided into sections each in a dominating colour with tonal variations, and is fresh and often delightful in the contriving of cases, pedestals, back-cloths and changes of level. The designers are masters of the fashionable way of using wood. The craftsmanship of the exhibition itself is superb.

'It is this very excellence that sows doubts in the mind. That modern phenomenon, exhibition design, has reached such a pitch here that the exhibits take second place. This new technique is an art in itself and, like all art, is selective. It has been so selective in one of the three subjects, Architecture—that noble lady—has been misrepresented. Rightly, the medium is photographs, but these have been seized upon by the exhibition designers merely to serve as decorative motifs in their own art-form, rather like wall-papers. Discarded are many of the most significant things in Scottish building through the centuries—the Lothian farmstead, that rich jewel of the Lowland landscape, the castle in its moving simplicity (Craigievar is not enough, and Borthwick is spoilt), the rural mansions of the XVIIth century, the majestic mills of Ayrshire and Lanarkshire built in the early 1800's. Who made tradition live more intensely than C. R. Mackintosh or Robert Lorimer? The latter is not mentioned, the former in a 12-in. square view of one of his poorer exteriors.

'Undoubtedly space was limited, but it has been wasted. A few large photo-murals (that of Traquair 12 ft. by 8 ft. is excellent and there is a telling juxtaposition of the dynamic buttresses of Loch Sloy dam and Dunfermline Abbey) would have been enough to give something of the essence of the real thing. The opportunity of this Exhibition should have been taken to present a serious and coherent review of the living architecture of Scotland.'

Summer Vacation—Library Closing

The R.I.B.A. Reference Library will be closed throughout August, while the Loan Section will be open only between 12 noon and 2 p.m. (12 noon to 1 p.m. on Saturdays). The staff will, however, be pleased to welcome, between 2 p.m. and 4.30 p.m. (except on Saturdays) visitors from overseas and the provinces wishing to see the Library collections, providing that they have been introduced by Members or Institute staff.

From Monday 3 September the Library will be open as usual between 10 a.m. and 7 p.m., except on Saturdays, when it will close at 2 p.m. From 6 October inclusive and on all succeeding Saturdays during the Session the Library will remain open until 5 p.m.

Index to Practice Notes

Enclosed in this JOURNAL is an index to *Practice Notes*. These notes, edited by Mr. Charles Woodward [*A*], have been published in the JOURNAL since the issue of April 1945, and the index should provide a useful guide to the many subjects dealt with.

It is hoped to publish further indices annually. Additional copies may be obtained on application to the Secretary, R.I.B.A.

Northern Ireland Housing Medal designed by James Warwick in consultation with the architectural staff of the Ministry of Health and Local Government of Northern Ireland. The awards were announced in the June JOURNAL

Value of Work Which May be Tendered for without Quantities

Following negotiations carried out between the Institute, the Royal Institution of Chartered Surveyors and the National Federation of Building Trades Employers, the latter have agreed to amend their rule so as to raise the limit of work which may be tendered for without quantities from £1,500 to £3,000. This increase in the limit takes effect immediately. On the part of the R.I.B.A. it has been agreed that every effort should be made to co-operate with the N.F.B.T.E. in the observance of the amended rule which now, in effect, includes the single small dwelling house of ordinary standard erected for a private client.

The Council urge members most strongly to accept the concession made by the N.F.B.T.E. in the spirit in which it was offered and to be careful to avoid any evasion or waiver of the rule. The number of contractors invited to tender for each contract where quantities are not taken off should be kept to an absolute minimum.

Revision of Model Building Bye-laws

The Minister of Local Government and Planning has appointed a committee to help in the revision of the department's model bye-laws. The periodic revision of the model bye-laws is designed to take account of new developments in building methods and materials, and the appointment of an advisory committee for that purpose follows the practice adopted in 1936 for model bye-laws issued after the passing of the Public Health Act of that year. The Chairman of the new committee is Mr. S. F. Wilkinson, C.B., Under-Secretary to the Ministry of Local Government and Planning. The architect members are Mr. P. Cutbush [*A*], representing the British Standards Institution, Mr. C. S. White [*F*], representing the R.I.B.A., and Mr. A. Scott, M.B.E. [*F*], of the Ministry of Local Government and Planning.

Liverpool School of Architecture: Festival Exhibition 1951

As part of the University of Liverpool's contribution to the Festival of Britain, a comprehensive exhibition of the work of the Liverpool School of Architecture is being held in the school from 23 July to 11 August. It will be opened by Sir Patrick Abercrombie at 3.0 p.m. on 23 July, the Lord Mayor of Liverpool presiding.

This is the first occasion on which it has been possible for the school to resume its pre-war practice of showing a wide range of its students' work. Since 1939 token exhibitions only have been held in a small gallery in Bluecoat Chambers in the centre of the city, as other accommodation was not available. Now, however, it has been practicable to arrange for the school's studios and exhibition galleries to be devoted to a representative display of drawings and models.

It is hoped that, in addition to other members of the profession and the public generally, many former students of the school may be able to visit the exhibition and that a large number will make a special effort to attend the opening ceremony.

The Architectural Significance of 1851

By R. Furneaux Jordan, A.A.Dipl. [*F*]

Read before the Royal Institute of British Architects, 19 June 1951

J. L. Denman, F.S.A., Vice-President, in the Chair

Mr. R. Furneaux Jordan [*F*]: When I had written this paper it seemed to me that some explanation was necessary. My title, you may have noticed, mentions neither the Crystal Palace nor the Great Exhibition. It was assumed that by the middle of 1951 our audience might be familiar, even *ad nauseam*, with the story of Paxton's building. I hope, therefore, that I shall be forgiven if I give no more than a very sketchy glance at it. To architects there may be little new material about the 19th century, and so I must ask you to regard the slides you will see as a kind of kaleidoscopic background.

Now let us turn our minds to that heroic strip of Hyde Park behind the barracks which Thackeray described in May 1851 as a quiet green.

'A quiet green' wrote Thackeray of Hyde Park in May 1851:
'A quiet green but few days since,
With cattle browsing in the shade,
And here are lines of bright arcade,
In order raised!
A palace as for fairy prince,
A rare pavilion such as man
Saw never since mankind began,
And built and glazed!'

Apart from a magical emergence out of Thuringian forests to marry princesses at a wave of Stockmar's wand, there was never really anything fairylike about any Saxe-Coburg princes. But if today Thackeray's ode seems naive, we do realize in 1951 that it was a true expression of national feeling. This feeling, it is significant, was shared both by the high-born and by the industrious poor, by the new, raw, busy England of the coal measures and by the old, mellow, leisurely England of the clay and the oolite.

And Thackeray, of course, although in raptures over Paxton's 'blazing arch of lucid glass', did not forget the greater significance of what was beneath:

'Look yonder where the engines toil;
These England's arms of conquest are,
The trophies of her bloodless war:
Brave weapons these.
Victorious over wave and soil,
With these she sails, she weaves, she tills,
Pierces the everlasting hills,
And spans the seas.'

Toiling engines, whirring looms, and the elegant and magical palace for the fairy prince—utility and romance, cash and sentiment, grime and purity—there lay the tragic schizophrenia of the 19th century. Since there *are* laws governing man and his visual world, that schizophrenia, that unresolved duality in society had to reveal itself in the end in architecture. The artist may yearn for his ivory tower, but just when he thinks that with his dreams he has conquered or escaped from his world he exposes himself, at least for posterity, as of that world's very essence. A Victorian church is never so Victorian as when it is most faithful to its Middle Pointed model. What could be more eminently Victorian than those two arch-escapists—Augustus Welby Pugin and Dante Gabriel Rossetti?

Every age of achievement has its own peculiar quintessence which binds all its children—rebels and conformists. This quintessence has been different things at different times: the faith and crafts of mediaevalism, the administrative and structural genius of Rome, the intellectual balance of Periclean Greece or even the tormented gloom of the Dark Ages. And tragically, it is in its own strength that each age sows the seeds of its own death: monastic corruption, Roman excess, Greek self-absorption or Victorian prosperity.

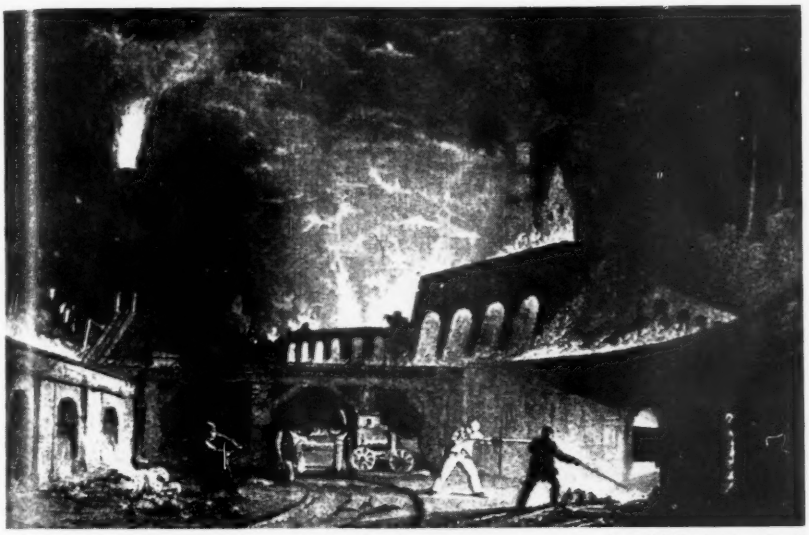
So, too, there are birth pangs. Each age of transition can change existing art forms only as it can transpose human values. Patronage and techniques must change together. Only as the conquistadores of the Spanish Main replaced the princes of the Church could the Elizabethan mansion—with such new arts as those of cabinet-maker, stuccadore and gardener—replace the chapels royal. Only when sovereign states replaced feudal lords—and that had to happen, for feudal lords can hardly govern the Indies—only then could the royal and military capital, scenic and baroque and with 50 new arts in its train, replace the lovely mediaeval labyrinth as the supreme art form. And only when the landed Regency bucks were replaced by railway kings, cotton merchants and Staffordshire ironmasters did the gay stucco spas give way to the docks, the square miles of marshalling yards, the Rhondda Valley, county gaols and Manchester itself. Eighteen fifty-one was *not* an age of transition; it was a celebration of the triumph of the English ironmaster.

Thus must each age create a new visual world in strict obedience to its own essential nature. Irrespective of what seems *at the time* to be intrinsic merit, only an art obedient to this law ultimately lives. Brunel, not Landseer, was obedient to it, and yet the Victorians, had they thought about it, would have expected us in 1951 to be paying renewed homage to 'The Monarch of the Glen.' It is the pastiche Brunel that would have surprised them—our deliberate transfer of an item from the cash and utility column to the romantic and artistic one where it had really belonged all the time.

The fascination and tragedy of the Victorian era is that its quintessence was in itself a conflict. Tennyson's romantic 'Idylls of the King' were written for stockbrokers' daughters; Pugin's romantic feudal pinnacles were for the Parliament of the Reform Bill; Rossetti's romantic paintings were sold in Lancashire and Belfast; and the bastions of the Conway Bridge, or the gables and turrets of a dozen stations, had on them everything from the Barons' Wars except a portcullis. An earlier generation had had no better use for its sham ruins than to stick them in parks; now there was the useful railway . . . romance and grime could meet, just occasionally.

This combination of social disintegration and vast resources was historically unique. It is true—if we must find an historical parallel—that the 16th and 17th centuries also had to work in obedience to a great dichotomy—Catholicism and Protestantism—and in obedience found inevitably their highest achievement. Milton and Loyola, Bach and Palestrina, Bernini's baroque piazza and Wren's Protestant preaching houses are, like the stake or the thumbscrew, illustrations of the deep emotions aroused on both sides of a great controversy. Controversy means fervour or passion, and passion is inspiration. But *that* dichotomy—the religious schism of 16th and 17th century Europe—had never been a major *technical* revolution. Patronage had shifted but the craftsman had survived. Man's visual world was changed more completely by Stephenson and Watt than by Luther and Calvin. Luther and Calvin changed the purpose for which he built; Stephenson and Watt the material of which he built and the scale on which he built.

Moreover, while Luther and Calvin had been symbolic world figures, the core of a cultural quintessence is always, it would seem, geographically concentrated. Once it was in little Attica or in the Ile de France; *now* in the 19th century—Europe having long since turned from the Mediterranean to the Atlantic—it was in this small island. When once the island's harbours and coal measures had been linked together by water and iron, the stage was set to rebuild London and change the world. The international character of the 1851 Exhibition was not due to an interest in foreigners, it was a patronising gesture from a *herrenvolk*, fearless of competition. Nineteenth century society and its technical revolution can be studied in England,



Above: Newcastle-on-Tyne Iron Works, Lymington. From an engraving (1835) by T. Sands after T. Allom. Right: Columbia Market, Bethnal Green (1869). Architect, H. A. Darbyshire

where it can all be pinned down like a biological specimen and dissected. Then we see how the great divide between utility and romance ran through a single society.

Thus, too, in England were created Disraeli's 'Two Nations'. Slowly but surely, through the economic and political machine, without bloodshed but with an infinity of suffering, was shattered that older agricultural and aristocratic society which must have seemed, until after the Napoleonic Wars, as stable as any the world had known. Somewhere, hidden in that drama, was the virility, the passion and the inspiration.

We can recall wistfully quiet Victorian scenes: country rectories, the 'sprigged muslin in Kensington Gardens' or the dreaming empty spaces of The High at Oxford; but in truth it was an age of brilliant lights, deep darks, tremendous energy and flashing melodrama. The black smoke above the new cities was drama enough, but symbolically we must see it also drifting across the farmlands of the England of George the Third, and across the parks of the romantic England of the Regent. The Satanic mills, you will remember, lay very close under the moors of Wuthering Heights. In the 17th century the Lutheran and Catholic churches could, in the end, exist together on either side of the Alps; but only in the Queen's England could Rennishaw and the Derbyshire coal-mines share the same landscape and the same landowner; and only in the Queen's England could Nasmyth's steam hammer be enshrined in a fairy palace.

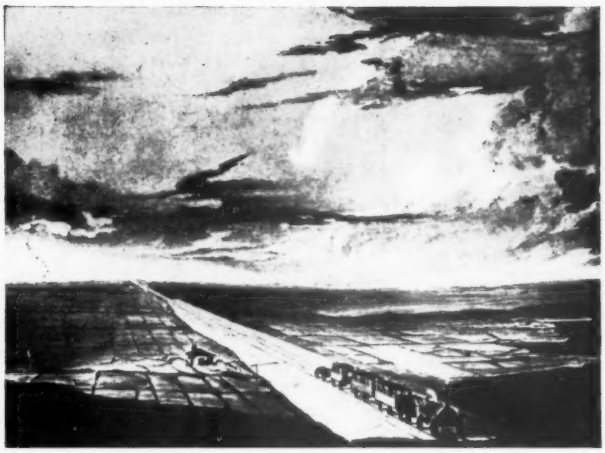
This great technical revolution was not a torrent; it was a Niagara. For the new Philistine it meant cash. He might salve his conscience with sabbatarianism or philanthropy, but by and large he was punch drunk with cash. Against his own materialism he might be hungry for romance and for romance laid on thick, but he could never begin to understand or to like that high tradition of taste and style that had for the 18th century mattered so much and meant so much. Those few, aristocrats and antiquarians, to whom it still mattered were swamped; they shrank into their corner—a small and esoteric group. The twilight of the architect had come.

In this landscape of viaducts and raw embankments lying beneath smoky skies, the broad highway lay open to the engineers —and, my God, they took it! If the architect liked to hitch his waggon to the same star he could. We have only to look at the black 19th century chunks on the grey mosaic of the London map to see that it was a world whose structural achievements, as it often boasted, do outweigh those of the Pharaohs or Caesars, and yet the architect suddenly becomes a dim figure. Barlow's beautiful iron roof of St. Pancras Station cutting ruthlessly across the Gothic windows of Scott's hotel epitomizes the situation. Much has been written about iron roofs and we all know the anecdotes about the hotel—what is symbolic is their juxtaposition. The same kind of contrast can be drawn between Dobson's fine roof at Newcastle Central and the virile but unrelated porch which Prosser stuck in front of it. When, however, an engineer, like Cubitt, takes complete control as at King's Cross—a rush job to be ready for 1851—then the scale of the viaducts creeps through into an urban façade.

In the *Seven Lamps*, published two years before the Crystal Palace was prefabricated, Ruskin proved that God—according to the Old and the New Testaments—had not put iron ore into the earth to be part of architecture. If it had been used for building, as two generations earlier in the Stroud Valley mills, then, of course, those buildings were just not architecture. Ruskin, however, had private doubts, for he spoke of the 'moral problem' of iron as one which came 'in a questionable shape', and he had had to wriggle about Florentine tie-rods and nails. But three years after Paxton's triumph he was still trying in vain to persuade Dean and Woodward at least to conceal in some way the iron roof of the Oxford Museum. His moral rule had force at places like the A.A. where they fussed about art and had prayer meetings; and even a hundred years later there are still a few architects who like to pretend the steel isn't there. That, I suppose, is how the Lamp of Truth is still kept dimly burning.

Four hundred years before that it was the architect who had taken command; the country mason and the guild craftsman who had been driven into the byways. But now, in the 19th century, it was the architect who became an unimportant figure, interesting only to architects and then mainly because, like Hardwick, he put a Doric portico at one end of the Midland railway, because like Digby Wyatt he partnered Brunel at Paddington, or like Pugin threw pebbles at Goliath. Only now and again does a professional gentleman from Conduit Street slip almost by accident into this portrait of an age, and then it is often with distaste and only for the sake of his wife and little ones. We still honour the memory of Sir William Tite with an archaic prize, but some of the money he left us was honestly, if rather secretly, earned building all the railway stations between Paris and Le Havre. The engineers—with only a handful of architects in tow—took the broad highway as the new masters of the visual world; the Battle of the Styles was fought out quite privately at the end of a cul-de-sac.

Of course we can, if we like, devise some narrow or cowardly definition of architecture which will allow us to settle down in a cosy corner with the historians to discuss Hansom, Butterfield or Carpenter. But if we do, then first we must realize that we shall be distorting the 19th century by discussing only one small facet of it. Secondly,



'The engineers . . . took the broad highway as the new masters of the visual world . . .' Welwyn Viaduct, 1850

'In this landscape of viaducts and raw embankments. . . .' Embankment on the Liverpool and Manchester railway

we must realize that our definition will have excluded from architecture both the mediæval town, a conglomeration; and the aqueducts, built by the sappers of the legions. If, however, architecture is the whole structural visual world—technics and cities—then *real* architecture was, with literature, the dominant art of the 19th century. This was the twilight only of the *architect* as opposed to architecture. The tide of technical revolution had swept away real structure to some point beyond his amateur comprehension and beyond the 'good taste' of that system of patronage which, he still hoped, would not die. His only consolation was to keep alight the Seven Lamps while the great black cities grew.

Eighteen fifty-one is the symbolic date of this twilight. Whether or not the twilight has now become a dawn; whether or not the architect has converged once again upon the broad highway to meet the engineer, is not our business this evening. The era of the professional architect—a very brief era in the great cycle of the arts—began gloriously in Italy with Brunelleschi and Alberti and ended in England, rather provincially, with Nash and Soane. Lutyens, Blomfield, Baker were all a hundred years late and never knew it. We have worked our way through all that and today, in 1951, have even finished, one hopes, with the idea of Victoriana as something merely amusing. We can now stand, very significantly, on Bazalgette's great embankment to feel the cold wind of truth (spiced with a little wit) blowing gently northwards across the river. I can think of several differences between Bazalgette or Paxton and Hugh Casson, but the latter is at least an architect.

The tragedy of that divided Victorian society was twofold. First, its dual nature kept it for ever from the highest peaks of achievement; the golden ages of Parthenons and Ravennas had not only long since passed out of the world, but were, we now see, equally inconsistent with railway booms and with earnest romanticism. Second, it was tragic because it could never itself quite make out what had gone wrong. The age was fascinated to the point of awe by its own tunnels; it had no doubts about their magic or their stupendous novelty, but it also felt some moral duty to regard them as a source of wealth whereby something quite different, called the 'fine arts' —meaning often the worst sculpture and some of the worst painting ever known—could be allowed to flourish.

What, of course, the age could not see—it was too near to itself—was that the destruction of an aristocracy, a priesthood and a peasantry, begun 400 years before, was now completing itself and that the vacuum must be filled, not by incidental fashions in style, still less by what it called the 'fine arts', but by the age's very essence—structure.

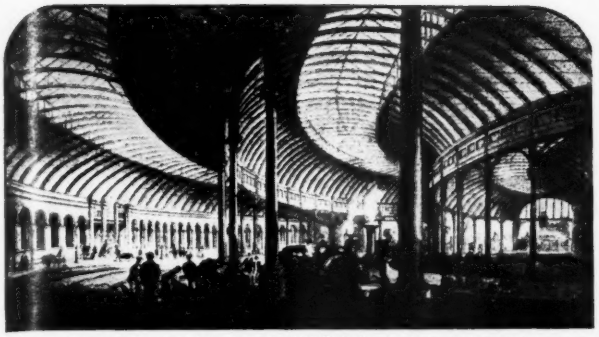
Good painting, like good poetry and the thin thread of romantic architecture (in spite of the 'official' Gothic of the Law Courts and the Houses of Parliament), went into the rebel or heterodox camp. Whistler's 'At the Piano' was shown within 10 years of the Great Exhibition, but it was Landseer who left a quarter of a million. This fairly normal turn in the wheel of fashion might have surprised the Victorians, but what would have hurt *and* surprised them would have been the odd way in which we smile at the orthodox art, at Hiram Power's 'Greek Slave' or at the gigantic statue of the Queen in zinc; for they were a parvenu generation—sensitive as well as self-assured. But what would have shocked and astonished them even more would have been the fact that the tunnels, warehouses and delicate iron roofs are, 100 years later, regarded by young architects as the 19th-century's greatest achievement *within the arts*—and most shocked and astonished of all would have been our professional colleagues of 1851.

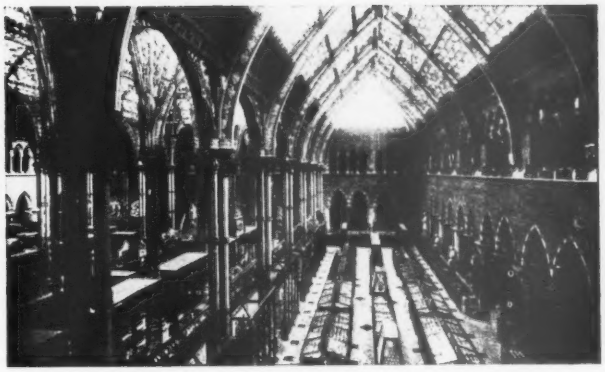
Not that the young architects of today are wrong. These things have happened before. Roman proconsuls, proud of their vulgar Hellenistic villas outside Nimes, would have been equally astonished at the praise lavished by the centuries upon that useful waterworks—the Pont du Gard, a job of which Brunel, but not Butterfield, would have been proud.

Let us be sure, however, in this 1951 summer of Victorian memories, that we do not turn the wheel too far. Victorian achievements, in both halves of that society, were stupendous, but just because society did have two halves and was not—like Periclean Athens or Angevin Christendom—at one with itself, its achievements were always below the top line. Of not one of the many Victorian giants in any sphere could it be said as Matthew Arnold had said of the dead Keats: 'He is, he is with Shakespeare!' The Preraphaelites really do matter but they are not the Italian Primitives; the Midland Railway really is a monument to the energy of man, but it is not the Pont du Gard. But then the Italian Primitives and the Pont du Gard could never have come into existence together; the first was contemporary with only primitive engineering and the second with only crude painting. The Preraphaelites and the Midland Railway, however, were robust if monstrous Siamese Twins; the patrons of the former being the magnates of the latter.

However, when either half of the Victorian age was being true to itself; when railway kings were swinging gauged brick viaducts across the Dee Valley and driving the Kilsey tunnel, or when—on the other hand—Turner was painting, say, 'The Sun of Venice Going to Sea', or when Pugin was devising the scarlet and gold of the House of Lords, then as an age it does take a place of sorts in the succession of world cultures.

The romantic artist, finding his inspiration in his dreams or the passion of his social protest, or the conformist engineer cashing in on the bandwaggon of his time, had each their great moments. Holman Hunt was neither more nor less Victorian than Brunel. His fanatical mission to save sinners through painting was typically Victorian (1851 was the year in which, as a penance, he painted 'The Light of the World' out-of-doors on frosty nights). But the age belonged to the Brunels; they had stolen it and were its master spirits. The painters, philosophers, and poets could still matter both as an official opposition and because they were as always the underground force reshaping their world for the distant future and for us. In the great roaring '50's, however, they must have seemed





Above: Central Station, Newcastle (1850). John Dobson's Royal Academy drawing. Right: The Oxford Museum. Architects, Deane and Woodward

in their ivory towers of rebellion to have mattered only a very little. Wordsworth's *Excursion*, Carlyle's *Past and Present*, Ruskin's *Seven Lamps*, Dickens' *Oliver Twist* or *Dombey and Son* (with its Camden Town railway scenes), Pugin's *Contrasts*, the Tractarian Movement, the Preraphaelite Brotherhood, the Red House and Morris's *News from Nowhere* were all arrows let fly from the ivory battlements against grime, cash and tunnels. But for the architect there can never be an ivory tower, and out in the cold hard world, under the smoky skies and with a slave economy to hand, the Brunels and Telfords were too busy and too prosperous to bother with him . . . much.

Just now and again, inevitably, the two worlds met. The poet might glimpse romance in 'the ringing grooves of change', and Martin might paint his fantasies of chaos and old night from hints picked up in the Black Country at dusk. Bell Scott even painted the industrial scene as the culmination to an historical series. Turner might see a vision on the Great Western as in 'Rain, Steam and Speed' or transmute the sooty towers of Newcastle into pure Claud Lorraine, and then, too—now and again—the engineers might machicolate. Often, of course, the two worlds got physically mixed and so, as the train runs its last miles into Liverpool Street, into London Road, Manchester, or into New Street, Birmingham, one still sees the dingy Tractarian spires and Ruskinian Board Schools—beacons of piety and enlightenment—standing high above a grey ocean of Welsh slates. But that was a chance mixture, and if Keble's *Christian Year* had produced the Tractarian spires, no one ever wrote a poem about the Festiniog slate quarries or about the navvies swarming like ants over the Chat Moss embankment and the Lickey incline. On the whole, appeasement in this cold war was rare, and it can never have seemed very likely that those seething, turbulent years of wealth and poverty, cruelty and philanthropy, fanaticism and hypocrisy, elegance and squalor, could leave behind them any symbol of their monstrous two-headed nature. In the event they did, and that symbol was the Great Exhibition of 1851.

So long as each half of this very complex society went its own way, as long as the romantic limited himself to dreams of Lancelot and Iseult or to savage comment on the materialist, and as long as the materialist limited himself to his job of making money and buying romance, then all was comparatively well—at least for one of Disraeli's 'two nations'. It was only when the two halves were brought together in highly unnatural wedlock—as sooner or later they were bound to be—that the Victorians provided the raw material for Mr. Lytton Strachey to be ironical and for Mr. Osbert Lancaster to be funny. There is nothing inherently comic about Rossetti and nothing inherently comic about railways, but Rossetti in a train is somehow the beginning of a joke.

The consummation of this unnatural marriage, the grandest and most deliberate of all the attempts at reconciling the two worlds, was the Great Exhibition of 1851. We can see the Crystal Palace as a most elegant shelter for the engines *or* as a useful iron structure for housing bad sculpture, but in both cases the incongruity of the 'Rossetti-in-a-train' type is there. That is why we have never quite made up our minds whether—like the Victorian age itself—the Great Exhibition was supremely great or supremely comic. Oddly enough, of course, it managed to be both. Remembering the sincerity, the optimism and the prayers it was also perhaps—looking back on it over the space of a hundred years—supremely tragic.

Above all it was a miracle. The industrialists were too busy and too prosperous to need an exhibition. The aristocracy were too comfortable and too obtuse about the future to bother; and the rebels—the Carlyles and Ruskins—can have seen no reason for celebrating the triumph of filth and cruelty. It is indeed difficult to conceive of any neutral guiding force which could bring together those three warring elements—officially described as 'Machinery, Science and Taste'. This neutral force must not be insular and yet, since the whole mood had to be one of fervent self-assurance, it must be intensely patriotic. It had to be earnest about economics, romantic about science and scientific about art. Obviously, therefore, it had to be German. It had to be politically neutral and socially influential—if only to satisfy the guarantors—and, of course, untiringly energetic. It was 11 years since Albert had left for ever the fairy castle of Rosenau, and for 11 years he had been looking for a niche. He had been snubbed by the aristocracy and lampooned in the streets, but every dog has his day and 1 May 1851 was most emphatically Albert's.

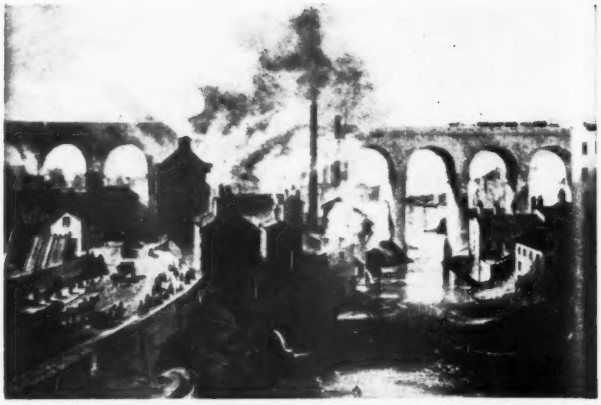
In spite of Thackeray's reference to:

> 'God's boundless Heaven is bending blue,
> God's peaceful sunlight's beaming through,'

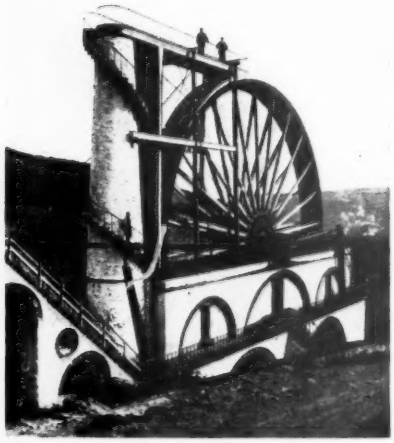
the morning of 1 May was, in fact, showery, and the glimpses of God's sunlight intermittent. But if the real sky of the century was turgid—a Piper sky with sunlight behind thunder clouds—Thackeray had at least captured the buoyant mood of that particular morning. It had cleared by mid-day when the Queen left Buckingham Palace, and after that all was jewel-like.

The guardsmen's horses, the Sovereign's escort to nine State carriages, were still those delicate high-stepping beasts with curved necks and big nostrils who come to us in Regency prints. The flags in serried lines along Paxton's eaves and the pennants dressing the frigate on the Serpentine all flew bravely, while the raindrops glistened and sparkled on the glass and on Owen Jones's brilliant paintwork. The procession of the season-ticket holders—1,050 noblemen's carriages, 800 broughams, 600 posting carriages (mostly with postilions), 1,500 cabs, 300 clarences and 380 other vehicles—formed a twinkling, glittering line (glossy coachwork, glossy horses, glossy toppers), all the way back to the Strand where it met the chimes from the City churches. This cavalcade was converging upon the apotheosis of mechanized transport and everyone seems to have missed the point. In the carriages and the clarences was the last generation of merchants to live over their City countinghouses; already they were moving out to pretty Islington, to the leafy villas of Herne Hill, to Cubitt's Pimlico and to the white cliffs of Bayswater and the Cromwell Road, to bigger drawing-rooms and bigger nurseries. By the 'sixties, with Consols still going up, the Forsytes were all living round the Park, buying pictures and paying for Gothic churches.

'The age was fascinated to the point of awe by its own tunnels; it had no doubts about their magic or their stupendous novelty. . . .' A working shaft in the Kilsby tunnel (1837). Engineer, Robert Stephenson



'. . . when railway kings were swinging gauged brick viaducts across the Dee valley and driving the Kilsby tunnel.' Above: Stockport Viaduct (1850)



The waterwheel and pump at Laxey in the Isle of Man, designed by John Casement, a local mechanic, to pump water from a lead mine (1854)

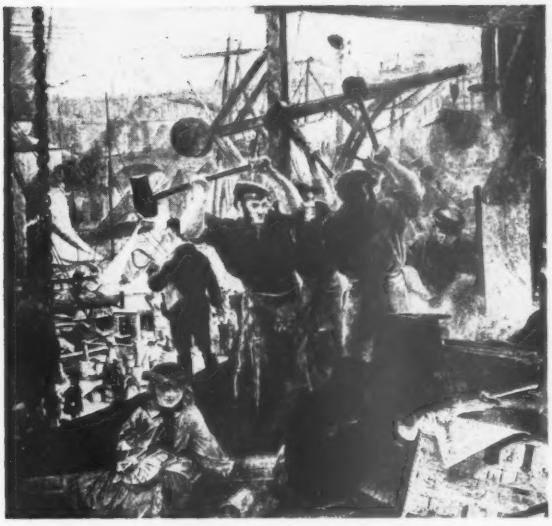
They were not alone that morning. From dawn the labouring masses, with the help of excursion trains from the north, and the village peasantry in parties under the care of their vicars, had been picnicking on what they called the sward. Fagin and the Artful Dodger did a roaring trade, but Colonel Sibthorpe's scourge of Papists and his Bubonic Plague were all forgotten. The first burst of cheering came early, it came outwards from the Crystal Palace when the Duke of Wellington was discovered with Lady Douro in the Waxed Flower Section. Thereafter the morning was punctuated by cheers. As the royal cortège reached the north door there was a flurry of ostrich plumes, white satin, red velvet and little girls' pantalets. Then as the balloons went up into the spring sunshine and the music stopped, the cheering became a great roar of huzzas from Notting Hill to Trafalgar Square.

The 'two nations' were both in the Park that morning, but otherwise, one may ask, what on earth had this buoyant scene to do with the smoky skies or the Puseyite churches, with the great viaducts or the Preraphaelite dreams? Nothing whatever. Until that moment, after the Hallelujah Chorus, when the Queen passed through the Coalbrookdale Gates to the toiling engines and the model of the new Liverpool docks—until that moment it all had nothing whatever to do with either of the dual worlds of the 19th century. That scene on 1 May 1851 was the last act of the age of elegance, and yet the perfect backcloth was the Crystal Palace.

That buoyant morning was all meant to be the celebration of iron and steam, and yet—at least on this side of the Coalbrookdale Gates—with the parasols, the high-sprung carriages and the breakfasts at Brookes and Whites, it might equally well have been part of the Peace Celebrations of 1812, and still the perfect backcloth was the Crystal Palace. The Palace was crystalline, it was elegant and it was slender. Somehow it contained within itself just the ghost of a ghost of Carlton House or of a Sussex Terrace drawing-room writ very large. Halve the scale, put some fronds round the top of Paxton's columns and you are back in the simpler rooms of the Pavilion at Brighton. True, you can halve the scale again and you are in one of Mr. Aslin's classrooms—but that is an altogether different story.

The whole form and structure of the Crystal Palace was dictated by expediency. It is an illustration, if ever there was one, of the thesis that only through inspired obedience to all the circumstances of a moment does an artist succeed. The Crystal Palace was poised magnificently and accurately in mid-century; in its transparent Regency elegance it was the perfect setting for that Winterhalter scene of 1 May, and yet in its scale and in its structure it is not and never could have been a product of the age of Nash and Soane. The biggest unbroken floor space of *that* generation had been Porden's Riding School at Brighton (178 ft. by 58 ft.), a *tour de force* in laminated timber. Somehow, I suppose, the Carlton House elegance of the Crystal Palace was begotten by Paxton out of the Palm House at Kew and the Chatsworth conservatories, but essentially it was a triumph for big Midland contractors. The conservatories were only collateral, the real ancestors were iron train halls and Paris markets. A building reveals its designer as mercilessly as it does its era, and the more one studies the Crystal Palace the more plain it becomes that Paxton was a man of taste, but not of education, who had dabbled very competently with railway shares *and* with water lilies. The Crystal Palace was by Newcastle Central out of Lilia Victoria Regia.

In spite of Albert's earnest care for the 'fine arts' it seems to have been taken for granted by almost everyone that this would be a building with which the gentlemen of the Seven Lamps were to be hardly concerned at all. Once the complex prelimin-



'. . . Martin might paint his fantasies of chaos and old night from hints picked up in the Black Country—Bell Scott even painted the industrial scene as the culmination to an historical series'

aries between the Royal Society of Arts and the Treasury were over, and the battle with Colonel Sibthorpe and THE TIMES had been waged; once in fact it was decided that there really would be an Exhibition on that site, it was Brunel himself who proposed a competition. He was to play the dual rôle, by no means unique, of assessor and winner.

'I believe', he wrote at the end of 1849, 'that there is no one object to be exhibited so *peculiarly* fitted for competition as the design and construction of the vast building itself. Skill of construction, economy of construction and rapidity of construction would call forth all those resources for which England is distinguished.'

The committee of assessors was weighted with engineers. True, there were three architects: Cockerell, Barry and Donaldson, but as they were respectively to be the Royal Gold Medallists for 1848, 1850 and 1851, they must already have been past their prime. There were three engineers: William Cubitt, Stephenson and Brunel, and two members of the nobility of whom one, the Duke of Buccleuch, was himself an engineer. Cubitt was chairman. Thereafter, save that Owen Jones advised on colour, that Pugin had his little mediæval court and that Barry claimed credit for Paxton's transept, we are back in the railway age. The competition committed nobody to anything and the 233 schemes were all rejected in favour of Brunel's dome—a monstrous bulb of sheet iron 200 ft. across. If Paxton, through the science of construction, managed to bring south the grace of a Chatsworth garden party, Brunel would have brought us little with this bulb except the robust stink of Wolverhampton and Smethwick.

On Friday 7 June 1850, two weeks before Brunel's tenders were due, Paxton told Mr. Ellis, M.P., manager of the Midland Railway, that he had 'had an idea'. On Tuesday, at a Midland Railway committee at Derby, Paxton made the famous blotting-paper doodle. In nine days the Chatsworth Estate Office turned the doodle into plans and a vast set of calculations. On the tenth day Paxton, waiting for a connection at Derby, mysteriously 'fell in' with Stephenson who had been visiting his great job at Menai. Twenty-four hours later Paxton was inside Buckingham Palace. It was not quite jobbery, but it was swift. Even on the 1850 railway map Derby was not on the line from Menai to Euston. The electric-telegraph clerks may have been busy, but anyway if you have an age of *laissez-faire* you mustn't grumble when the devil takes the hindmost.

Brunel, whose successes were now behind him, could afford to be chivalrous over the death of what he euphemistically called his 'bantling'. Paxton, with the spur of royal approval, now acted quickly and his arrangements with Fox and Henderson and with Chances were so advanced that by 16 July (five weeks after the blotting-paper doodle) the Building Committee unanimously adopted the plans. The committee were embarrassed by their own conduct but realized that they were being got out of a very nasty hole—in at least five ways. One: ever since Paxton's appeal to public opinion, through the ILLUSTRATED LONDON NEWS, Brunel's dome had been widely unpopular. Two: Brunel's very permanent-looking brick sheds had again fanned the flames of controversy over the desecration of the Park. Three: they couldn't be built in the time. Four: they would cost more to remove than to build. Five: the exhibits would have been inadequately lit.

Albert's black despair of the previous month would alone have forced the committee's hand, but Paxton—if he was to be trusted—really had solved the problem. It is not always realized how functionally essential it was that the Crystal Palace should be crystal, that its walls and roof really should be 95 per cent glass. This evening, as the lights go up, the South Bank will assume its greatest glory; but in 1851, with the incandescent mantle 40 years over the horizon, the artificial lighting of a building as long as Portland Place and

'. . . only those who had fled to their ivory towers—the Preraphaelite dreamers and the gentlemen of the Seven Lamps—were left out in the cold'

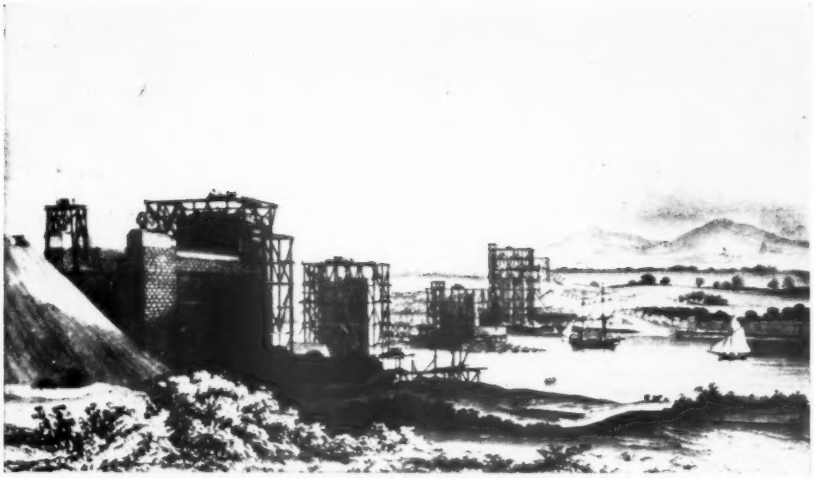
three times as wide was never even attempted. The Great Exhibition always closed at dusk.

However, the Building Committee were taking enormous risks. It was all paper and promises, and prefabrication of components (as distinct from the mere mass production of an article) was entirely novel. Victorian optimism was never so blatant as in this transaction. As Charles Dickens wrote in 'Household Words':

'Two parties in London, relying on the accuracy and goodwill of a single iron-master, the owners of a single glass-works in Birmingham and of one master-carpenter in London, bound themselves for a certain sum of money and in a few months to cover 18 acres with a building upwards of a third of a mile long.'

That was 16 June 1850; on 31 January 1851 the building was handed over to the Royal Commissioners for the reception of exhibits. Between those two dates lies the first miracle of prefabrication—a miracle *almost* without a sequel.

A miracle—because the essence of prefabrication is adequate preparation. There



. . . Paxton . . . mysteriously "fell in" with Stephenson, who had been visiting his great job at Menai.' The Britannia tubular bridge under construction, 1848

were hundreds of sheets of exquisite and entirely original full-sizes; even the beautifully designed column heads and joints which Brunel had used at Newcastle or Paddington were no sort of precedent for this job. There were, also, all the details for the ingenious devices—the famous glaziers' trucks running in the gutters, the mechanically controlled louvres to frustrate Sibthorpe's prophecy that everyone in the giant greenhouse would be roasted, or such beautiful examples of the new æsthetic of iron as the spiral stairs to the galleries. And all these on a module, so that even the fence round the site could ultimately go down as the floor boards. However honest the contractor, proper preparation is the first necessity of prefabrication; Paxton did prepare everything and think of everything, but when we examine his time schedule there just isn't room for that preparation . . . we can only deduce, literally, gallons of midnight oil.

I have tried to see the Crystal Palace as one should see any great building—giving it first a social or historical setting, glancing at its antecedents (conservatories and train halls) and then going on to judge not only whether it met its technical and functional circumstances, but whether those circumstances were or were not the mainspring of its inspiration or its poetry. On the whole, it stands the test and fails only where any work of art in the middle of the 19th century was bound to fail. The design by Brunel or one by, say, Pugin, would have been a mistake, for either would have been an over-emphasis of one-half only of the dual world. The Crystal Palace was a mirror—more or less—of Victorian England. As such it was, in one sense, a colossal success, but as such it was necessarily a failure.

When we have done our best for the Crystal Palace we still know in our hearts that it is not Chartres Cathedral, nor even —since we must be fair to it as a temporary building—the marquees of The Field of the Cloth of Gold. It fascinates us because of its social and technical significance. It fascinated the Victorians; in a wave of self-congratulation and gusto they even wanted it permanently in central London. In 1852 a very special plea was made in a pamphlet by 'A Medical Man' that it should become the Hyde Park 'Kurhaus' combining 'all that is desirable in the Spas of Germany with all that is decent in the Roman Thermae.' The plea failed and so it went to Sydenham where Ruskin described it as 'a cucumber frame between two chimneys'—and we would not have had it otherwise.

If, as I have said, the Great Exhibition was a mirror of the elegant England and the industrial England of the 'fifties, then it follows that only those who had fled to their ivory towers—the Preraphaelite dreamers and the gentlemen of the Seven Lamps—were left out in the cold. But since they too were part of the age, that could not be done with impunity—not in the end. And there lies the great sequel.

Some weeks after the almost Hanoverian scene of 1 May a curly-headed boy from Marlborough visited Hyde Park. William Morris was by nature, even then, more interested in the section labelled 'Taste' than in those labelled 'Machinery' or 'Science'. He spent a day among the 'fine arts' in the Crystal Palace, and he was then violently sick. In 1951 we have moved a very long way from 'The Dream of John Ball', 'The Well at the World's End' or the drowsy garden at Kelmscott; and yet in that little episode in the gentlemen's lavatory of the Crystal Palace there was founded one wing of the Modern Movement. The other wing, though Morris would never have admitted it, was up there above his head in the iron and the glass.

Ever since the Reformation, when structure and mysticism had violently dissolved their partnership, those two wings had drifted further and further apart. Neither belated cast-iron Gothic nor the Romantic Movement nor anything else had been able to bring them together. In 1851 they were poles apart and yet, since both were part of the central story of structure, both had somehow to be brought back into the bloodstream of our cultural fabric. For those two wings to meet—the romantic and the structural—has taken 100 years. Morris did, under the banner of honest workmanship, bring the dreamers out of their ivory tower and into battle. On the other wing the engineers—and specially one remembers Maillart—did ultimately rationalize the ships, bridges, and dams (not to mention cars and typewriters) so that 30 years ago in *Vers une Architecture* Le Corbusier could point to them as our main æsthetic inspiration.

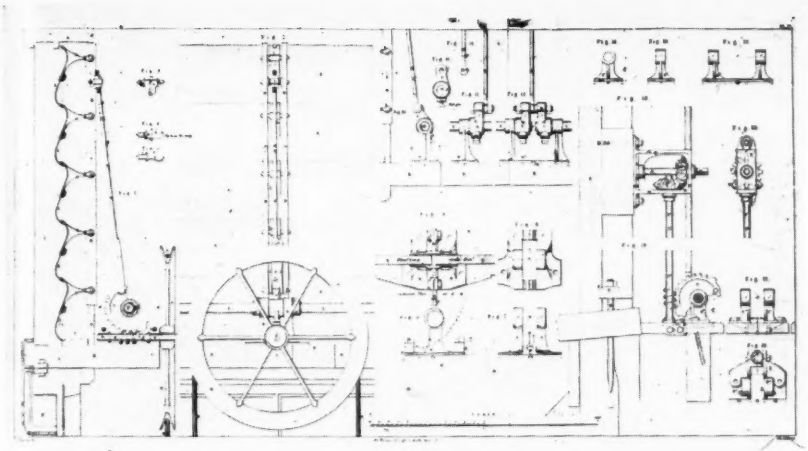
If to integrate a philosophy and a technique is the source of life in art then there are today on the South Bank things which—intrinsically slight and trivial though they may be—have yet the true dynamic of structure: the dynamic of Gothic. Today, in our union of science, engineering and art, Prince Albert, Henry Cole and even Sir Robert Peel would find a bizarre, incredible but sparkling realization of their own high enlightenment and ideals. They would be puzzled to know why it has all taken 100 years, but as pleased as we are surprised to discover that it has actually happened in England. The diversity of winding roads down which the once opposed armies of the Modern Movement have been marching have converged and met—the armies have discovered that they are allies.

Their battles have nearly all been fought; but all that is *our* story, and it is not one that I would dare to tell in this hall—so many of you are still alive. But the architect has at last rejoined the engineer on the broad highway. If the planet survives and if both can understand their true historic rôle, then the future might be theirs.

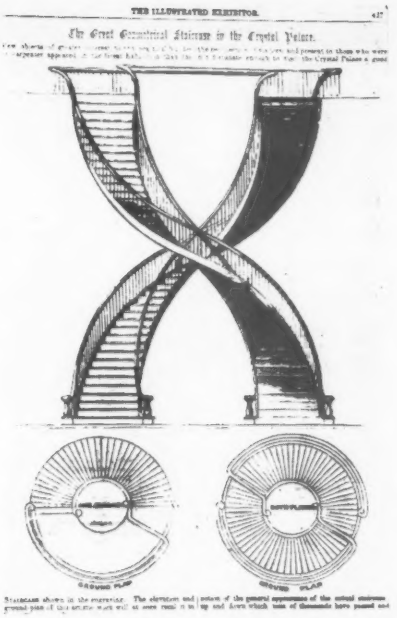
DISCUSSION

Mr. Hugh M. Casson [*F*]: Mr. Jordan was good enough to send me last week the script of his talk. I took it away with me for the week-end. I read it on Sunday, about 15,000 ft. above the Bay of Naples. (Fellow students of Stephen Potter will note here the use of the 'snob travel' ploy, recommended when the speaker has nothing particular to say but disguises this by diverting the attention of his audience elsewhere.) There below me lay the Mediterranean, deep, pregnant, sparkling, irresistible. On my knee lay Mr. Jordan's script, ditto. There you have all the makings of what I believe Mr. Jordan calls a dichotomy. It is, I think, a tribute to Jordan's wit and learning that it was he who, on the whole, won the day. Below me, unregarded, passed the islands of Ischia and Capri. 'What,' I thought to myself, giving the most perfunctory glance at Etna, rose-tipped by the sunset, 'can I say about Mr. Jordan's paper that is not merely the most banal of compliments which, because they are inevitable and in such smoothly worn words, never, somehow, seem to sound sincere?'

First, I should like to thank him warmly



'There were hundreds of sheets of exquisite and entirely original full sizes . . . the mechanically-controlled louvres to frustrate Sibthorpe's prophecy that everyone in the giant greenhouse would be roasted.' A working detail of the louvres and their controlling mechanism in the Crystal Palace



. . . such beautiful examples of the new æsthetic of iron as the spiral stairs to the galleries.' The great geometrical stair in the Crystal Palace

on your behalf for giving us a paper which contains so much instruction and which is so widely illustrated. It is always a delight to listen to a talk by an architect who has obviously bothered to choose his illustrations with the same care that he has used in the choice of his words.

Secondly, a comment on content. Mr. Jordan has been presenting a case and, like a skilled advocate, he has simplified issues. He has, I think, perhaps over-simplified them. He would, I think, be the first to admit that the impression I got is not quite a fair impression—that all Victorian engineers were on the right road and all Victorian architects on the wrong road.

As for the architects, I suppose we should laugh at their well-meant and self-assured architecture and disapprove of the unhealthy artistic dominance wielded by such men as Ruskin. But whatever the faults of their architecture—and God knows there were plenty—we should, I think, remember one thing in favour of the architects. They did care desperately, passionately, about architecture. They worked as hard and as ruthlessly, if perhaps as misguidedly, as any ironmaster; and though we may deplore much of what they achieved, for goodness' sake let us keep our respect at least for their energy and for their enthusiasm and for their passion, however misguided.

Victorian architecture, it is true, was founded on confused values, but Pugin, Ruskin and Morris were right, I think, in their main thesis that good architecture can only flourish in a good society; and most contemporary architecture, as we well know, is based on money values, which means no values at all. Do not let us forget, either, those few architects—'rogue' architects, as Mr. Goodhart-Rendel once called them in this room—who wandered off by themselves out of step and deaf to the rhythm of the herd.

As Mr. Jordan says, there are signs today that the divergent paths are re-uniting. Whether the century of separation between the architect and the engineer has been due to mental cruelty, incompatibility, or sheer dislike, it is not for me to say. But science, engineering and art are at last beginning to be allies. However, every general and politician will tell you that allies are just as difficult to deal with as enemies, if not more so!

Mr. Anthony M. Chitty [*F*]: It is almost impossible to follow Casson. He always says what you would like to have said, and says it in such a perfect manner. In seconding the vote of thanks he has proposed, I should like to say something about Paxton himself and about the importance of the personality of the individual, whether he be an architect or an engineer.

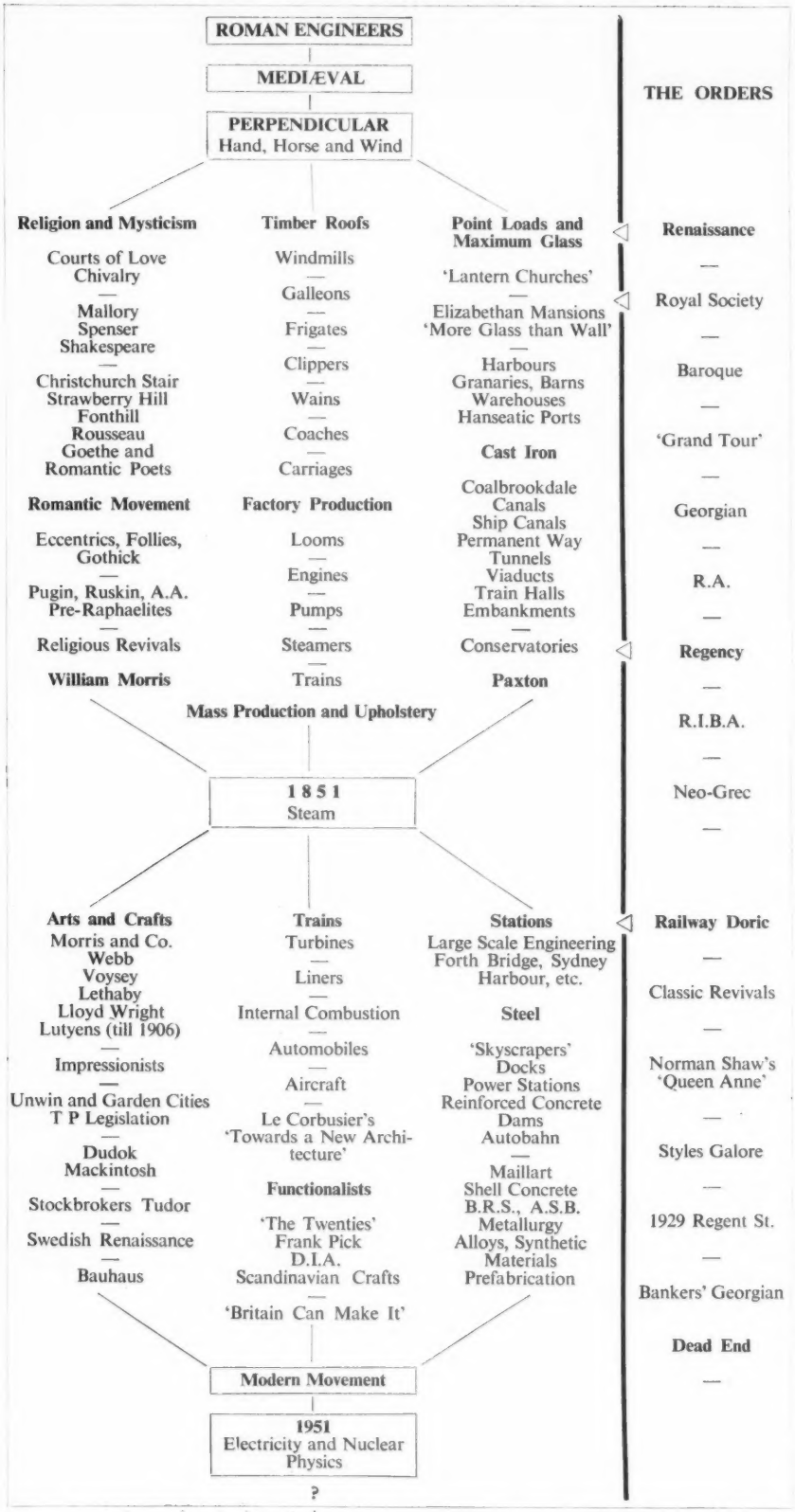
Mr. Jordan's theme of the severance of the architect and the engineer and his vision of their remarriage pays too little attention to the stream of architecture that was flowing strongly forward at that time in which Paxton's Crystal Palace was only a single item. It might, indeed, be said that the riding school at Welbeck or the palm house at Kew or, indeed, other buildings not designed in glass and iron merit greater consideration from the architectural point of view than Paxton's building, though probably technically less expert and certainly less important. But I think it was Paxton's personality that won through—and his talent for the job of pushing into Buckingham Palace was no less successful than his talent for share-pushing in the railway market. Both were irresistible.

May I remind you that his talent covered an extremely wide field. Building was only a small part of his life. His abilities and his range were immense and covered not only garden layout and his introduction of glass for conservatory walls, his botanical and horticultural skill, but also such things as his knowledge of frost physics, experience in the application of electricity to plant growth and a seat on the Board of the Midland Railway. It must have been an age of great people of that kind, because the boss of the Midland Railway, you remember, was George Hudson, that extraordinary figure who at the same time as he was Member for Sunderland was also Mayor of New York.

Paxton invented many other things. The folding angle-iron bedstead was invented by him for the Crimean War, together with a tent, the collapsible pole of which was also the pipe for a stove! His greatest work was perhaps not the Crystal Palace, but the fountain at Chatsworth which threw to a height more than twenty times that of the fountains we now see in Trafalgar Square—a very considerable achievement. In later years, when M.P. for Coventry, this extraordinary farmer's boy even indulged in trying to cure unemployment in his own town when the trades of ribbonmaking and watchmaking were in a decline. Indeed, we might well ask what could not Paxton have achieved if he had been trained as an architect!

To return to Jordan's paper and his theme of the division of responsibility for building into two streams with his suggestion that these streams will re-unite—or are in fact already re-uniting—this may be true, but it occurs to me that the real cause of that duality has not so much an architectural significance as an educational one. Its resolution is, perhaps, to be found in educational methods.

I do not know whether you have ever considered how each one of you enters this profession, but it is, one must admit, a slightly unscientific and rather chancey method. Either one's aunt sees one's



water-colour sketches and says, 'The boy must be an architect!' or else—as in my case—his father is interested in the history of the English parish church! Neither of these is really a sound method of selecting entrants for a great profession.

Mr. John Summerson [*A*]: What I am going to say can be summed up in two words: 'Remember France!' In studying the nineteenth century, we not unnaturally always think of the English nineteenth century, but the fact is that other countries have also had nineteenth centuries. If, in looking at the English nineteenth century, one bears in mind what was happening in France, one gets a different view of the whole course of the arts, including architecture, in Europe as a whole.

I am prompted to say this by Mr. Jordan's wonderfully dramatic and rather emotional presentation of our own nineteenth century. It is rather frightening in a way, this tremendous period of chaos and the emergence of an almost exaggerated position of importance for the industrialist and the engineer. Yet all that time the course of European culture was steadied to its classical normal level by France; the great tradition of French architecture admirably harmonized with the great tradition of French engineering and persisted in France from the beginning to the end of the century.

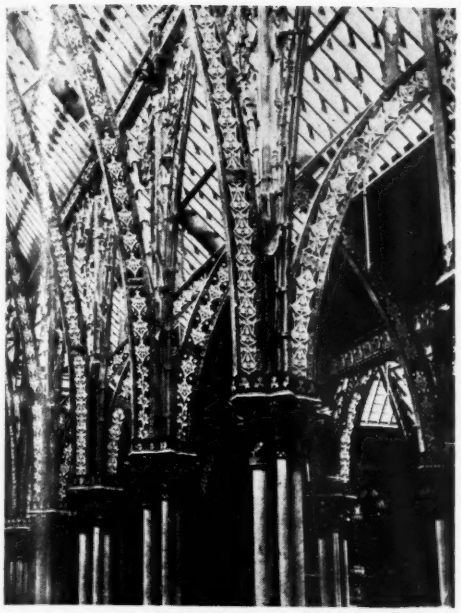
The vote of thanks was carried with acclamation.

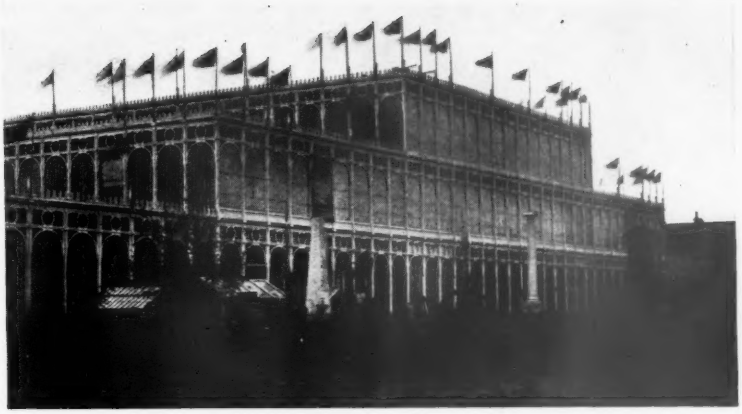
Mr. Jordan: Thank you very much indeed for the very kind way in which you have received my paper. I am very glad that Mr. Chitty has told us a little more than I had time to do about Paxton, who was an extremely fascinating, interesting and diverse personality. It does, as Mr. Chitty suggested, make one think very hard indeed about who becomes an architect and why, and about the whole of architectural education.

So far as Mr. Casson is concerned, I do plead guilty to deliberate and gross oversimplification throughout. I was trying to give a very broad picture of a chaotic scene, and I hope that that point was remembered, as I have not forgotten the tremendous efforts and the passion and fervour of Victorian architects. Indeed, I hope I have shown you something of the odds against which they were fighting.

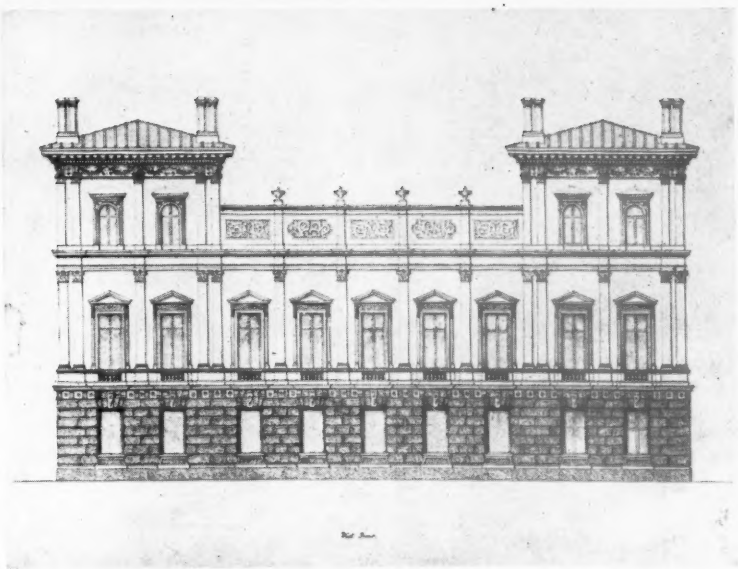
Remember France! Yes, but there were countries, I think, that did not have a nineteenth century. One of the most interesting things today, in studying—for instance—the different kinds of architectural education in the different countries is that so many of the European countries—the Scandinavian countries, for example—seem to have left out the nineteenth century. It has left us with such an enormous inheritance of problems as well as achievements, which for the little Denmarks hardly seem to exist.

'The diversity of winding roads down which the once opposed armies of the Modern Movement have been marching have converged and met—the armies have discovered that they are allies'





Above: 1856, The Oxford Museum. Deane and Woodward. Top right: 1851, the Crystal Palace in Hyde Park. Joseph Paxton. A contemporary collotype of the west end



R.I.B.A. Exhibition

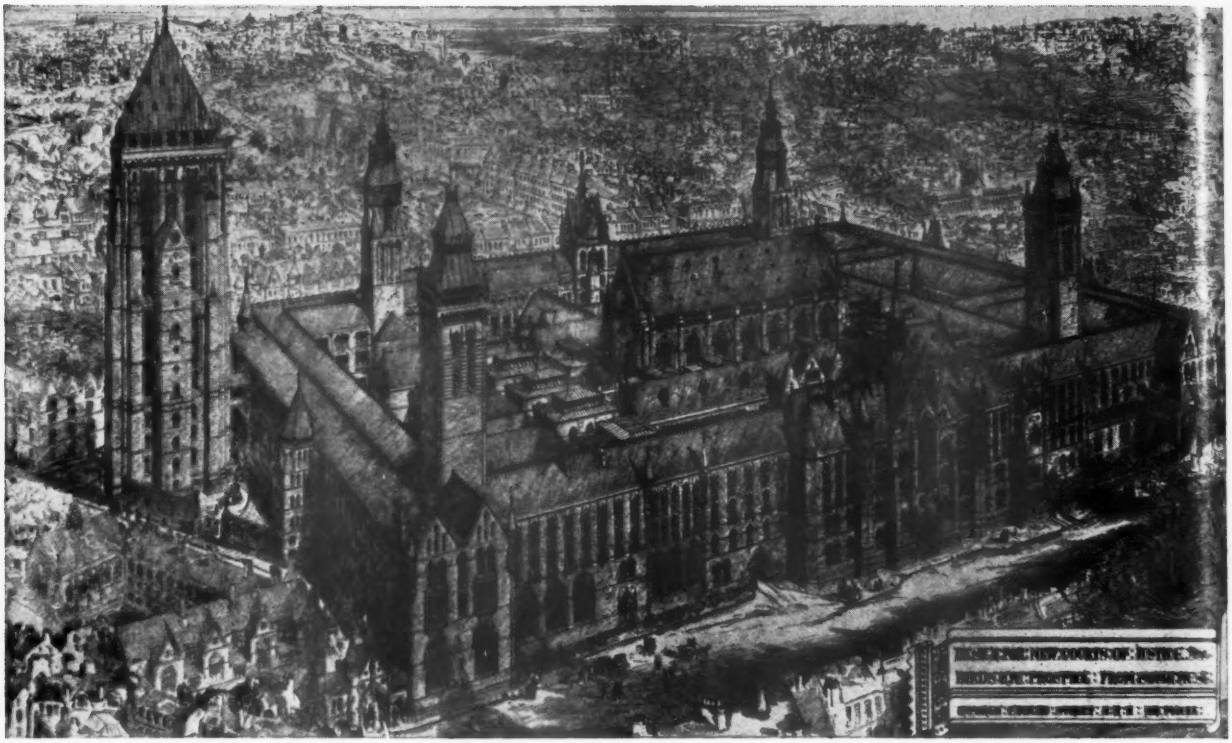
One Hundred Years of British Architecture 1851-1951

The exhibition and its handbook represent what is probably the first occasion on which a conspectus of British architecture during the last hundred years has been attempted. This confused, virile and technically revolutionary period arose out of the decay of Regency elegance and is now evolving into a clear-cut architecture of the people that owes little to the opulence of the 1851-1951 period, but much to its technical progress. This exhibition is therefore a kind of stock-taking, or perhaps a momentary glance backward preparatory to a move forward.

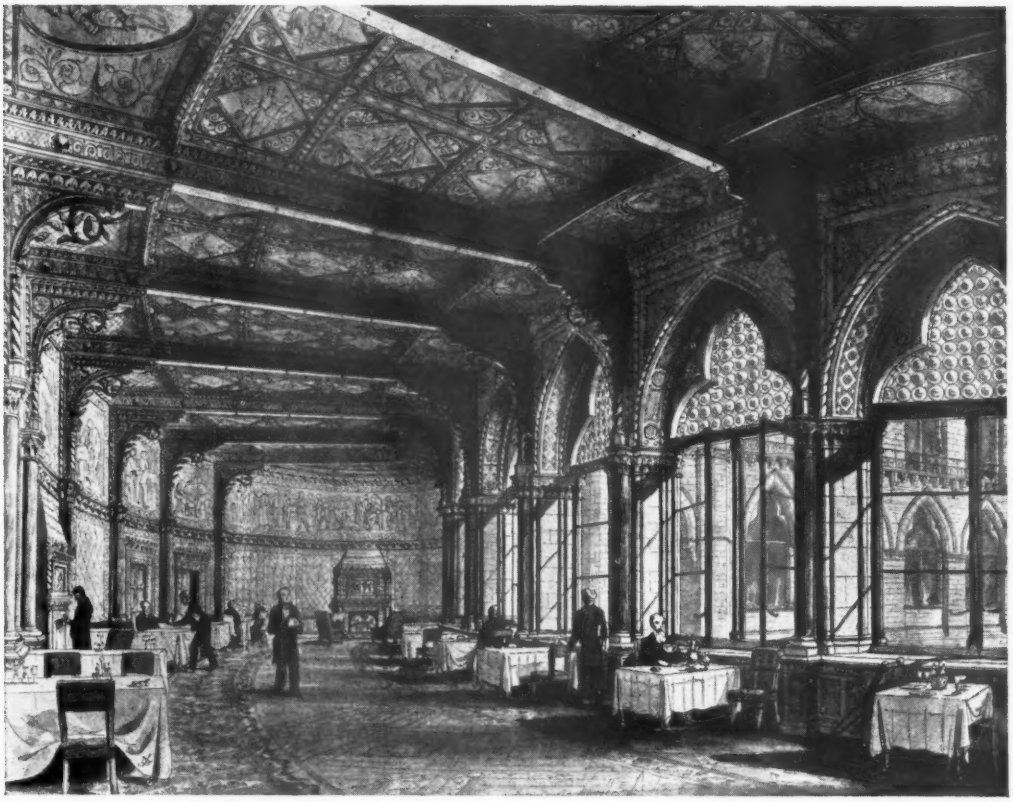
One hundred and six buildings have been chosen to represent the period. Some are shown in the drawings of their architects, but the majority in photographs. The Exhibition Committee has made an interesting experiment in layout by hanging 32 great photographic enlargements from the ceiling to supplement and lend height to the more intimate display on the low screens. In the handbook the principal achievements and developments of the period are discussed by six authors and the 50 illustrations are arranged in sequence of dates.

When this JOURNAL is published the exhibition will have been opened by the Earl of Bessborough. It will remain open until 4 September (10 a.m. to 6 p.m. Saturdays 10 a.m. to 5.30 p.m.).

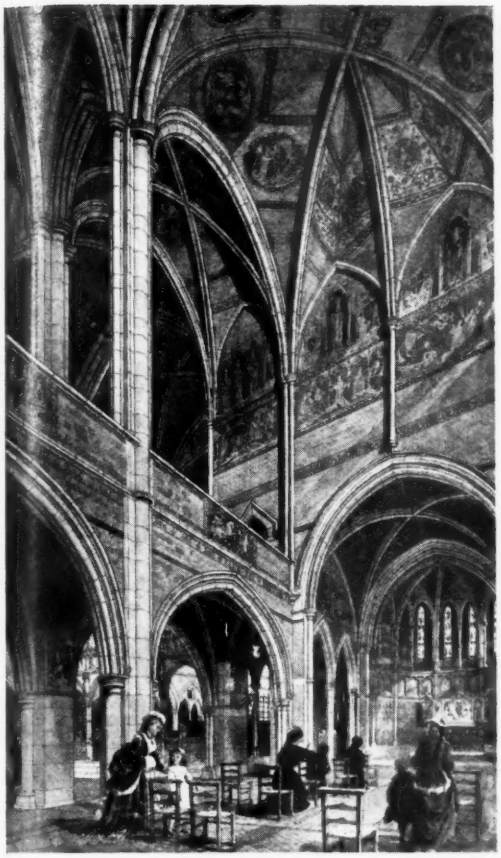
Middle right: 1857, Dorchester House, Park Lane, London. L. Vulliamy. Bottom right: 1858, Corn Exchange, Leeds. Cuthbert Broderick

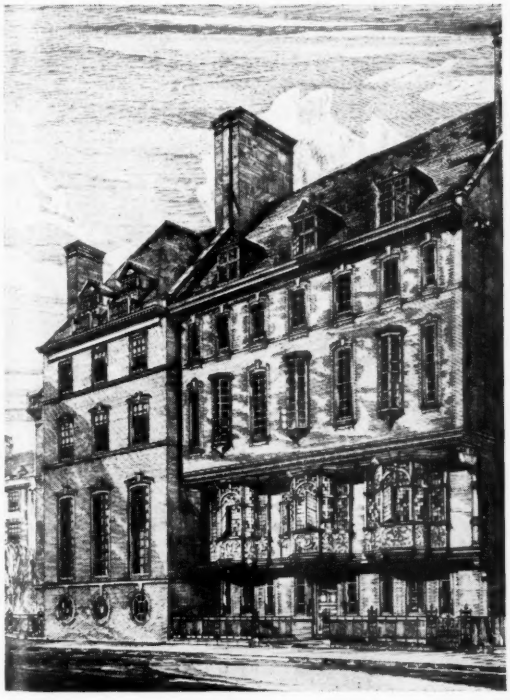


1882, The Courts of Justice, the Strand, London. George Edmund Street



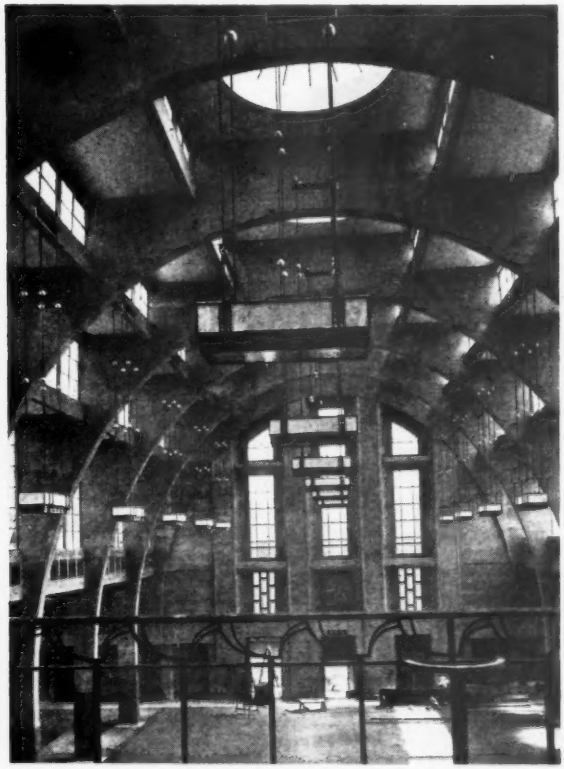
1872, St. Pancras Station Hotel; the dining room. Sir Gilbert Scott



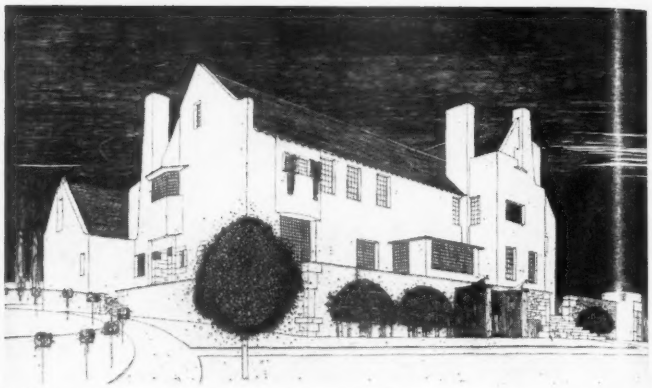


Top left: 1879, Church of St. Augustine, Kilburn. J. L. Pearson. Below left: 1876, The Old Swan House, Chelsea. Norman Shaw. Right: 1877, Manchester City Hall. Alfred Waterhouse

1938, The City Hall, Norwich. C. H. James and S. Rowland Pierce



1926, The Royal Horticultural Hall, London. Easton and Robertson

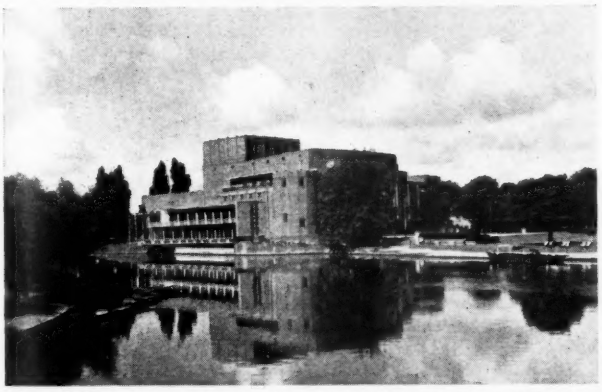


1902, Hill House, Helensburgh. C. R. Mackintosh

1894, Perrycroft, Colwall, Malvern. C. F. A. Voysey

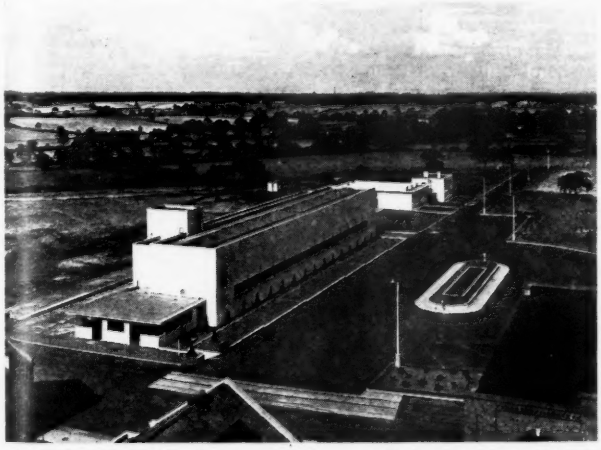
1935, "Highpoint" Flats, Highgate. Tecton

1951, Flats and houses at Harlow New Town. Frederick Gibberd

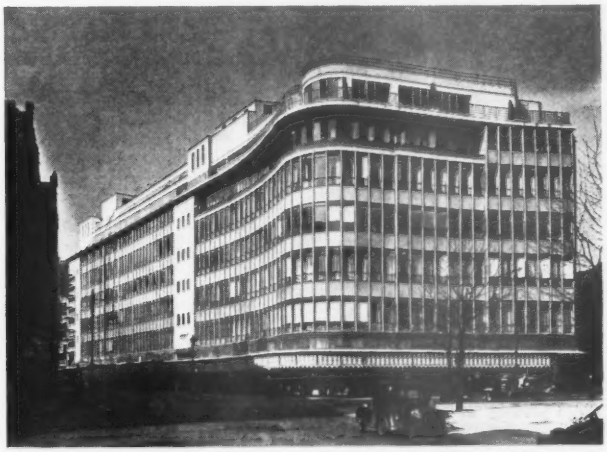


1932, The Shakespeare Memorial Theatre. Scott, Chesterton and Shepherd

1933, Arnos Grove Underground Station. Adams, Holden and Pearson



1935, Pithead baths, Coventry colliery. J. H. Forshaw and W. A. Woodland



1936, Peter Jones' shop, London. Slater and Moberly with Crabtree and Reilly

The Housing Manual, 1949

Technical Appendices

THIS COMPANION volume to the latest Housing Manual expands and brings up to date the information given in the Technical Appendices to the 1944 Housing Manual. The new volume sets out to establish a minimum code of good practice in the construction of all types of dwellings, and gives some of the results of the work undertaken in building research and of the wide experience of building techniques gained since the 1944 edition was published. It has been compiled by the Ministry of Works with the close collaboration of the Ministry of Health (whose housing functions now come under the Ministry of Local Government and Planning), the Building Research Station, and the Ministry of Fuel and Power.

These claims are justified; the new volume is more explanatory, and the illustrations are more clearly drawn and better reproduced. Some of the amplifications and differences from the 1944 edition are mentioned below, and it may first be noted that the various lettered appendices do not contain information in the same order as previously; for instance, the old Appendix C dealt with materials and construction, whereas the new C deals with functional standards. Incidentally, the old volume had the appendix letters printed at the top of each page, so that a glance showed you where you were, but this arrangement has not been followed in the new document.

The new Appendix C gives minimum standards, not allowing for exceptional conditions of climate or exposure. Under the heading Strength and Stability, the uniformly distributed loads are given that floors, roofs and their supports should be able to carry in addition to the dead load of the structure: 30 lb. per sq. ft. for dwelling houses of not more than two storeys not divided into flats, and 40 lb. per sq. ft. for other residential buildings. Minimum design loads are given for floors with a span of less than 8 ft., and for those with an area less than 64 sq. ft. If these recommendations conflict with the present bye-laws of a local authority, they will be specifically approved by the Minister of Local Government and Planning on application by the local authority through the appropriate channels.

For flat roofs, and those with a slope up to 10 degrees, the loads recommended, including snow but not wind pressure, are 30 lb. per sq. ft. if the dead weight is 10 lb. per sq. ft. or more and the roof is accessible, and 15 lb. per sq. ft. if the dead weight is less than 10 lb. per sq. ft. and the roof is only accessible for maintenance. Loads for slopes between 10 degrees and 35 degrees, 15 lb. per sq. ft.; 35 degrees to 75 degrees, 7½ lb. per sq. ft., and nil for slopes over 75 degrees.

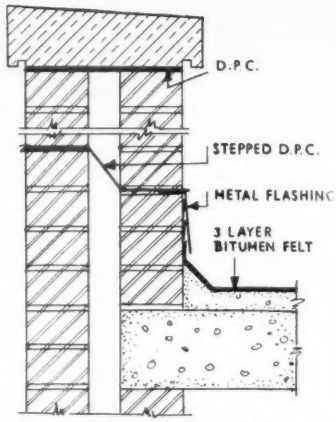
It is not thought necessary to calculate for wind pressure in a traditional two-storey house, because it is stiffened by partitions, floors and roof; but in many forms of non-traditional construction wind pressure will have to be considered, either on the structure as a whole, or locally as on roof or wall panels, and it is suggested that the calculations be made in accordance with the relevant Code of Practice, CP3—Chapter V, 'Loading', or that the stability of the structure and its parts be confirmed by test.

Brief mention is made in this Appendix C to moisture penetration, thermal insulation, exclusion of noise, durability and maintenance, infestation by vermin, and daylighting. On thermal insulation it is noted that an unventilated 11 in. cavity brick wall has a U-value of 0.30 'which is the minimum acceptable standard of insulation for the external walls of houses. U-values between 0·20 and 0·25 should, however, be provided where possible'. 0·15 to 0·20 for a solid ground floor is quoted as 'acceptable'. 'All experience in results, however, goes to show that the present practice of providing properly constructed solid ground floors is a considerable improvement over the ventilated joisted and boarded ground floor'.

On fire resistance the notes are based on the Code of Practice 3—Chapter IV. 'Precautions against fire', the standard fire resistance of a structural element being the period for which it must withstand the test laid down in British Standard 476.1932. Standards of daylighting at the working plane (2 ft. 9 in. above the floor) are given for kitchens, living-rooms and bedrooms.

Appendix D deals with materials and construction. It is much fuller than the comparable Appendix C of 1944. The notes on foundations are informative, more so than those in the previous Appendix. Some causes of ground movement are given, and the danger of tree-root systems in clay is mentioned; forest trees should never be planted near houses. A minimum depth is given of 3 ft. for foundations in clay where only root-systems of surface vegetation are present, and this is a desirable increase from the 2 ft. 6 in. previously recommended. A depth of 2 ft. instead of 1 ft. 6 in. is recommended for internal walls, on the assumption that in such positions the effects of changes in weather are less, and that root-systems of surface vegetation are less likely to develop.

In the 1944 Appendix the minimum width of strip foundation for internal 4½ in. bearing walls was less than for load-bearing external or party walls, but the new recommendation gives the same for both classes of walls, and points out that the loads per ft. run on internal walls can be as great, or even greater, than those on external walls, and that if the difference is marked, the width should be varied in proportion. It would have been interesting if the Appendix had included some observations on the comparative width of foundations under bay windows, where similar considerations sometimes apply.



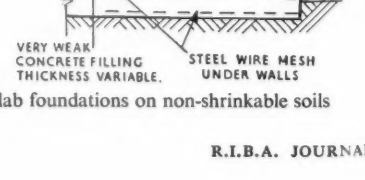
Section through a parapet in cavity walling

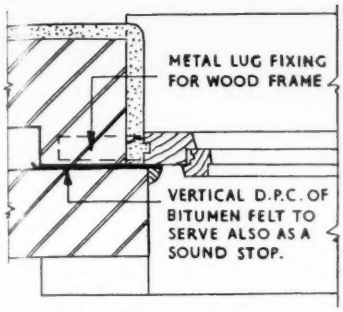
Two drawings are given showing slab foundations on non-shrinkable soils, and it is recommended that changes in floor level should be made by a filling of weak lightweight concrete on top of the slab, as it improves heat-insulation and facilitates the installation of services in the floor. A waterproof layer should be provided between the slab and the filling, except where the floor finish is impermeable. Whether the layer is above or below the filling, it should be continuous with the damp-proof courses in the walls.

In the 1944 Appendix it says that 'Particular care is needed in the selection of bricks for parapets and below damp-proof course level'; this is extended in the 1949 edition, where it is recommended that 'Bricks for use below the damp-proof course on sites which are very wet in winter, and bricks for use in retaining walls, free-standing walls and parapets, should be of a quality known to resist frost well and of low sulphate content'.

Slates and engineering bricks are regarded as permissible for stopping the upward movement of damp, but should not be used to resist water under gravity, as in parapets or above the heads of openings. A table is given of the properties of no-fines concrete according to the aggregate used, and it is recommended that the outside face be rendered.

The protection of parapet cavity walls is described and illustrated, and emphasis is


PITCH MASTIC ASPHALT TILE OR WOOD BLOCK LAID IN MASTIC
D.P.C.
6"
VERY WEAK CONCRETE FILLING THICKNESS VARIABLE.
STEEL WIRE MESH UNDER WALLS
Slab foundations on non-shrinkable soils



Plan of window jamb

laid on the need for a stepped d.p.c. to lead moisture on to the flat roof. Both documents urge that cavity walls should not be ventilated.

Party walls must provide a fire resistance equivalent to one hour under the standard test, and should give a reduction of 55 decibels in the intensity of airborne sounds. These standards can be met by a party wall of cavity construction, with leaves of 4½-in. brickwork, dense concrete or hollow burnt-clay blocks not less than 4 in. thick, or of lightweight concrete not less than 3 in. thick if the wall carries no load.

In the 1944 volume, Appendix E dealt with the scientific use of timber, and gave tables for the working stresses for beams, and sizes of joists and rafters at 18 in. centres, as well as sizes and spacing of purlins. The new volume gives tables for the limiting spans of floor joists of common sections and thickness of floor boards for given joist spacings; the table for spans being based on a safe working stress in flexure of 800 lb. per sq. in., in shear 80, and modulus of elasticity 1,200,000. It is noted that, despite the occasional chance of weaker pieces, most carcassing timber is of higher strength, and the members are usually coupled by floor boards, tile battens, and so on. Large knots should be noted, and pieces containing them should be used appropriately; members functioning individually should be specially selected. Special attention is called to Douglas fir and Western hemlock when 'quarter scant'; that is, when surfaced to give a cross-sectional dimension ¼ in. less than the nominal size. For joists of spans up to 8 ft. the assumed loading is a dead load of 6 lb. per sq. ft. plus a total imposed load, uniformly distributed, equal to 20 lb. for each inch of spacing between the centres of the joists. For joists exceeding 8 ft. span, the dead load is taken at 6 lb. per sq. ft. plus a super-imposed load of 30 lb. per sq. ft. Limiting deflection—1/360th of the span.

Wood-joisted floors, with ceilings of plastered plasterboard or of lath and plaster, give a sound reduction of 30 to 35 decibels, which is poor insulation against ordinary conversation, but this can be improved by pugging combined with a floating floor, which by itself is inadequate. Pending the result of investigations by the Building Research Station, 'properly treated concrete floors must be regarded as the only types likely to meet the recommended standard for flatted dwellings'.

The section headed *Precautions in the use of timber* contains a dissertation on knots, and the placing of members so that the knots do not come on the edges of parts in tension. The practical implication of this is made clear in a diagram showing the critical parts of the rafters, ceiling and floor joists of a house, and the tension and compression edges. A succinct account is given of dry rot, and the use of preservatives is recommended; the ends of joists for upper floors, which would otherwise come in contact with wall brickwork, should be steeped overnight in a tank of preservative; as an alternative, or preferably as an additional precaution, they should be wrapped in bitumen felt before building-in.

Appendix E deals with finishes to walls and ceilings. The findings of the Building Research Station on external rendered finishes are epitomized; hard renderings with a smooth trowelled finish are more likely to fail by crazing or separation from the background than softer rough-textured renderings. Renderings applied in wet weather may crack because the drying-shrinkage is delayed beyond the period during which the mix is still plastic. Two tables give information respectively on the preparation of background and appropriate undercoat for rendered finishes, and cement-lime-sand mixes for external finishes.

Useful notes are given on the protection of steelwork against corrosion, though it scarcely seems necessary to say that 'The more severe the exposure, the more efficient must be the precautions against corrosion'. A warning is given against gypsum and anhydrite plasters, as they afford no protection to steelwork, and may be corrosive, particularly those which contain soluble salts (sometimes acid salts) added to accelerate the setting time. Softwoods such as Western red cedar and Douglas fir, and oak and sweet chestnut among the hardwoods, are particularly likely to cause corrosion as they may contain organic acids and soluble salts.

Appendix F discusses heat installation, and gives a desirable temperature of 65 degrees F. for the living-room, and a background heating (45 degrees F. to 50 degrees F.) throughout the rest of the house. The hot water installation for a household of three or four persons should assume a consumption of at least 250 gallons at 140 degrees F. each week. The question of heat losses is dealt with at some length; a table shows how to calculate the heat losses from a typical living-room. Another table gives a comparison of the heat losses from a living-room where the insulation in one case is good and the other bad, and where the heating is in one example by an open fire with unrestricted chimney throat, and in the other by an openable stove or an open fire with restricted throat. In the paragraphs on fireplaces openings and throat it is stated that 'There is insufficient evidence on which to assess the probable value of a smoke shelf, but it seems likely that, in some circumstances, it would help to reduce the risk of smoke entering the room due to down draught'. The appendix ends with a description of district heating.

Appendix G, on the protection of plumbing systems against frost, recommends that the service pipe should enter the building at least 2 ft. 6 in. below the ground level, and should rise at a convenient point within the building at least 2 ft. away from the external wall. This is a variation from the 1944 edition, which gave the least depth as 2 ft. A precaution noted as important is that where pipes must be run on external walls they should be held clear of them, so that they do not lose heat directly to the walls. Pipes below the kitchen sink, and in bathrooms, are quoted as examples.

Appendix I, dealing with small sewage disposal works, treats the subject more fully than the 1944 edition did, and plans and sections are given for two-compartment settling tanks, one type being suitable for 4 to 20 houses; the other for up to 6 houses, two such units to serve 12 houses and three to serve 20 houses. Both editions recommend that the tank effluent should be passed through a filter, but where that is not feasible land irrigation must be used. The 1949 edition deals comprehensively with sub-surface irrigation, which can be successful if carefully designed and the subsoil is sufficiently porous. All this information is for isolated groups of houses which have a piped supply of water; where there is no piped supply other suggestions are made, including the provision of a settling tank where more than two houses are involved.

A subject not included in the 1944 edition is that of building costs, Appendix J in the 1949 volume, which states that analyses of post-war building costs show that costs higher than necessary are often attributable to the initial structural design, and under present conditions of material and labour supplies, close adherence to pre-war or traditional design may not always be economical. A few examples of the effect of design on cost are then given, such as site works and foundations, ground floors, first floors, roofs and walls. Examples observed showed that in one case six separate operations sufficed for foundations, foundation walling, and ground floor concrete slab, while in another twelve operations were required, with a variation of costs from £44 to £69 per house. It may sometimes be cheaper to use a more expensive covering to the ground floor, provided it covers the whole of the area, rather than several finishes each requiring different sub-floor levels and the employment of several trades.

The volume ends with an appendix containing a list of British Standards and Codes of Practice, followed by a bibliography.

This 1949 edition of Technical Appendices is published by H.M.S.O., price 2*s.* net.

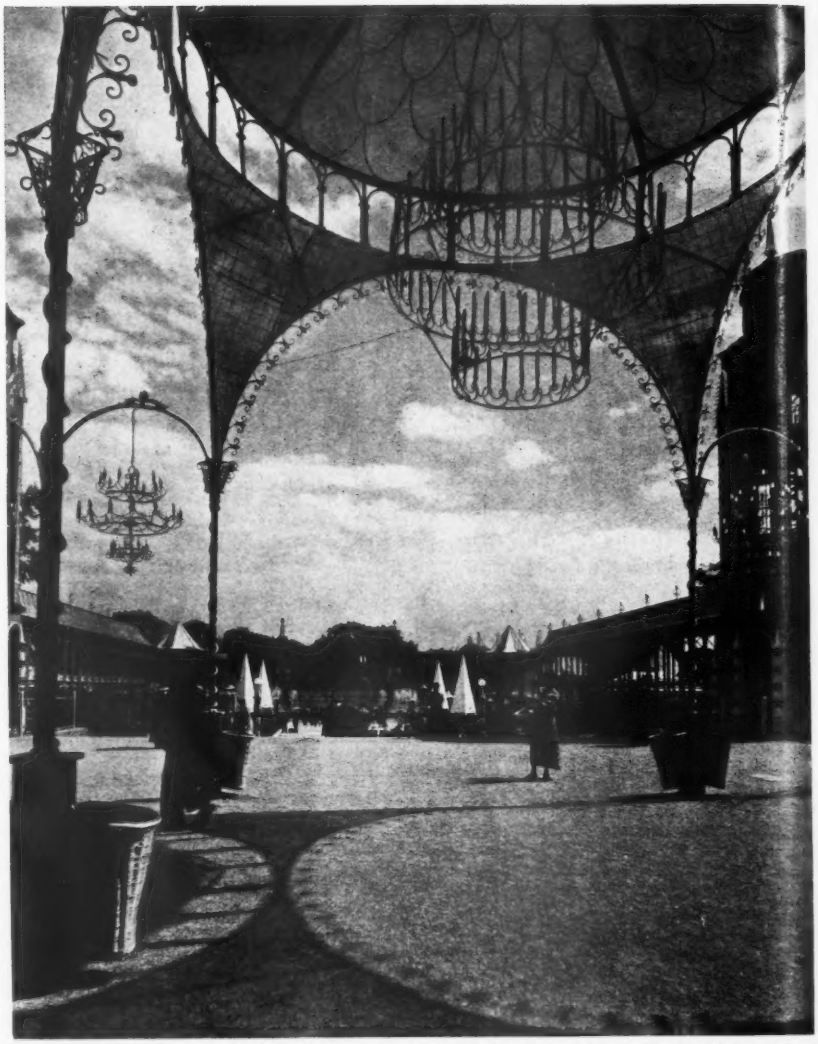
Escape from Utility

The Festival Pleasure Gardens Reviewed

By John Gloag [*Hon. A*]

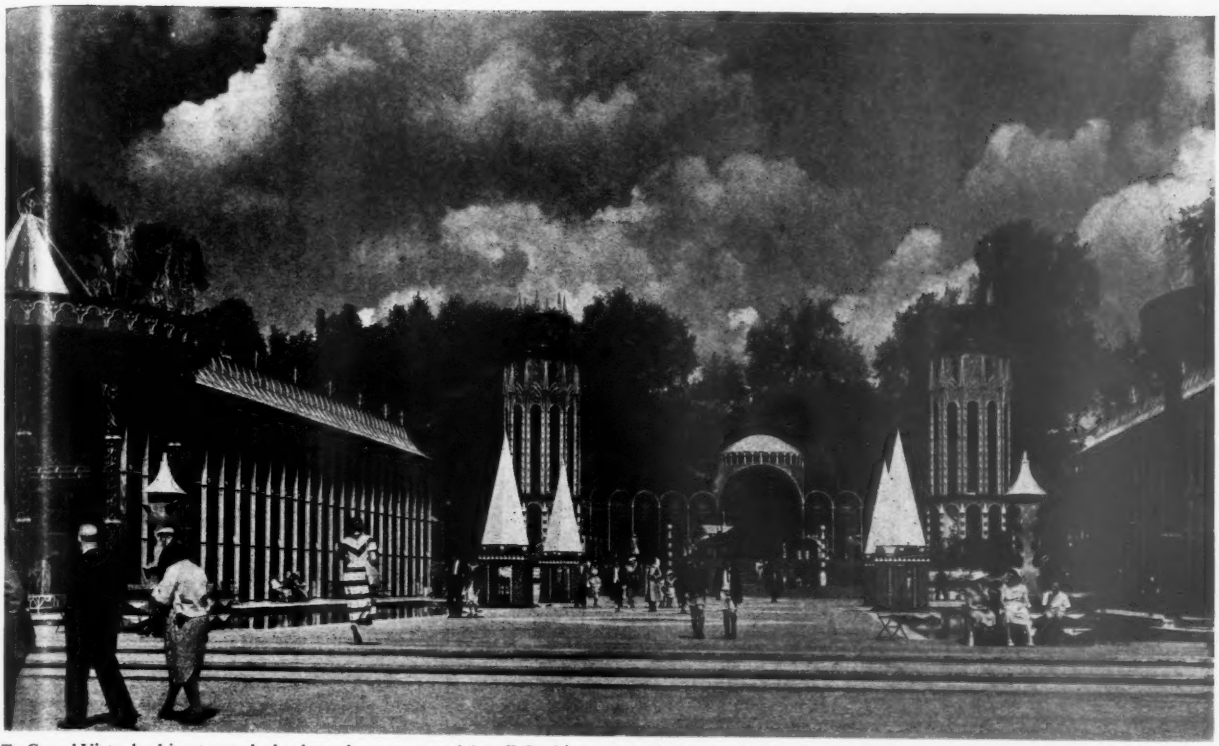
PEOPLE WHO VISIT the Festival Pleasure Gardens, which occupy a large and agreeable part of Battersea Park, need have no fear that their pleasure is being planned for them. They are not being directly or indirectly 'improved'—moral earnestness, that inevitable accompaniment of mediocrity, is not in evidence; there is no propaganda for anything except amusement; no instructions about the graceful and proper use of leisure; nothing in fact that we associate with economic or educational or political directives. In these few acres of Battersea Park, no matter what the weather is like, the miasmic fog of frustration is happily dissipated. For so many years we have been ashamed to build anything for pleasure, and pleasure alone, that the architecture, both permanent and temporary, that adorns the Gardens, has the same effect on the mind that a restoration to normal pre-war abundant diet would have on the body. The crowds of visitors are different from other crowds—they have lost their harassed, preoccupied look. For a few hours they have ceased to think about income tax, the microscopic meat ration, the price of cigarettes, the cost of children's clothing, the insipid exhortation that drips from high places day in and day out: in Battersea Park they are away from it all, enjoying something that is almost as old as England—the fun of the fair.

As in the South Bank Exhibition, great skill has been used in making a small space appear very much larger than it really is; and those who planned the Festival Gardens were helped in their creation of this ingenious illusion by the magnificent trees with which Battersea Park is diversified. When you enter the East Gate, and walk down the tree-lined Parade, you realize just how skilfully the natural features of the Park have been taken into partnership with the buildings. At the West end of the Parade you come to the head of the Grand Vista, and this you may regard from beneath the shelter of a tall, airy, domed structure from which depends an elegant chandelier. Flanking the beginning of the vista are a pair of towers—they have a wiry, Gothic flavour and might have been doodled by Wyatt on the edge of his drawing board, when he was thinking out some romantic piece of fooling for Fonthill. These towers, like the domed structure, are in the English tradition of ornate, eccentric and wholly admirable nonsense. As for the Vista—it gives an impression of great space, with plenty of room for people to stroll, and it is closed by the skeleton of a giant fern house that sketches in outline the familiar façade of Paxton's Crystal Palace. The pavilions and the towers and the little incidental buildings—such as tobacco and confectionery kiosks—exhibit a lightness of touch, an unforced gaiety in the use of colour and a blithe disregard of the now rather old-fashioned functionalist conventions that (if we allow ourselves to be serious in such a place) bring home vividly the fact that most of us are leading pattern-starved lives.

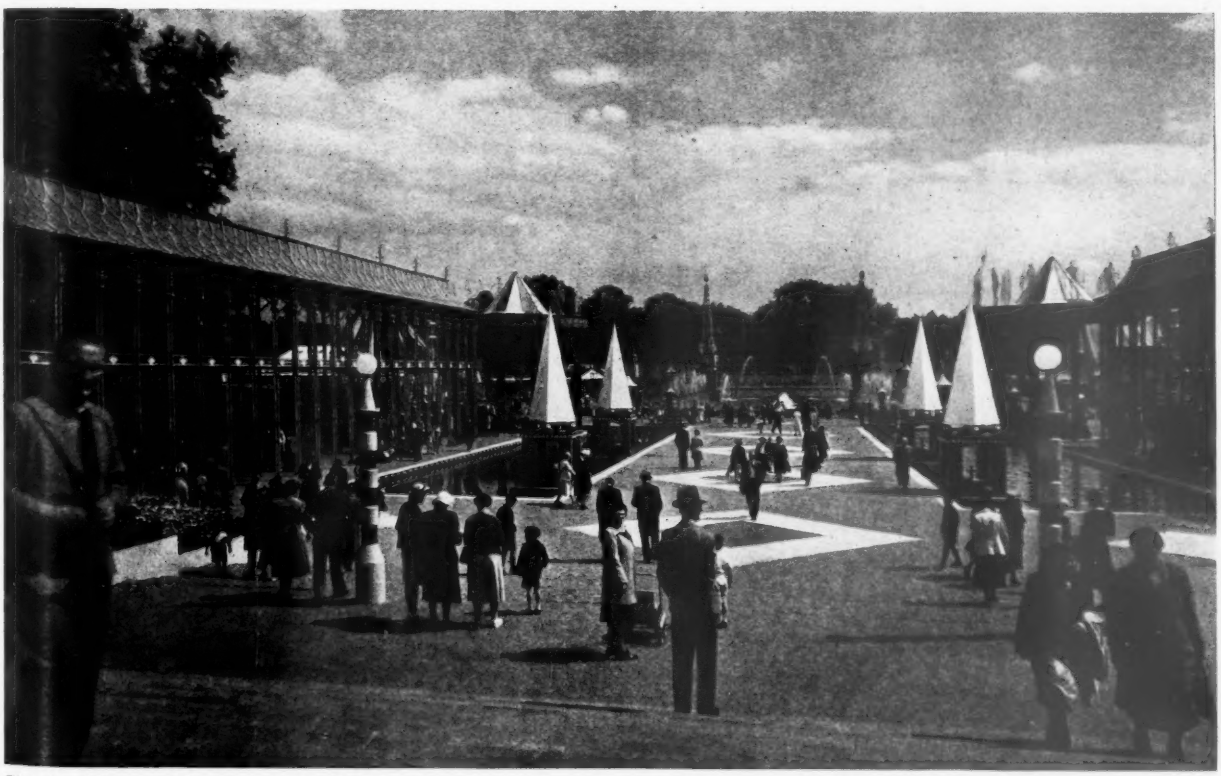


The domed structure with chandelier at the head of the Grand Vista. Designed by Osbert Lancaster [*Hon. A*]. Architects: Harrison and Seel [*A/A*]

Everything has an air of spontaneous gaiety. No earnest students of social science have sat down and said: 'We must create a series of machines for being gay in—we must ensure that *the* people are furnished with equal shares of recreational relaxation'. The English tradition in nearly all the buildings is triumphantly expressed; and any borrowing of decorative motifs from the past has been done light-heartedly, and obviously without any twinges of the puritan conscience which occludes the imagination of that sad creature, the 'dated' modernist. Here and there Scandinavian influence is apparent, and the façade of the Amphitheatre recalls memories of the 1923 Gothenburg Tri-Centenary Exhibition; but with a temporary structure, like the Dance Pavilion, we have something that is a piece of a very old England indeed. This great crowned tent, with its decorative finial, is akin to the sort of mediæval pavilion that was erected for the entertainment of kings—it suggests old pictures of the Field of the Cloth of Gold. Inside, it is well planned, airy, and has the slender grace associated with the Regency period. From that period, too, the Pavilion Buffet borrows something. It has borrowed something from the Brighton Pavilion—and some of the vertical features are of turned

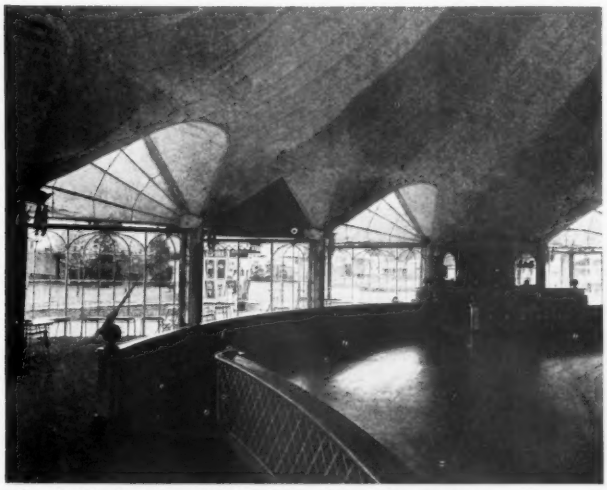


The Grand Vista, looking towards the domed structure and the off-Gothic towers. The towers designed by John Piper. Architects: Harrison and Seel [*A/A*]



The Grand Vista, looking towards the Giant Fernhouse. Fountains designed by Osbert Lancaster [*Hon. A*]. Architects: Harrison and Seel [*A/A*]

The Dance Pavilion. Designed by James Gardner. Architect: Roger K. Pullen, A.A.Dipl. [*F*]. Engineers: S. H. and D. E. White



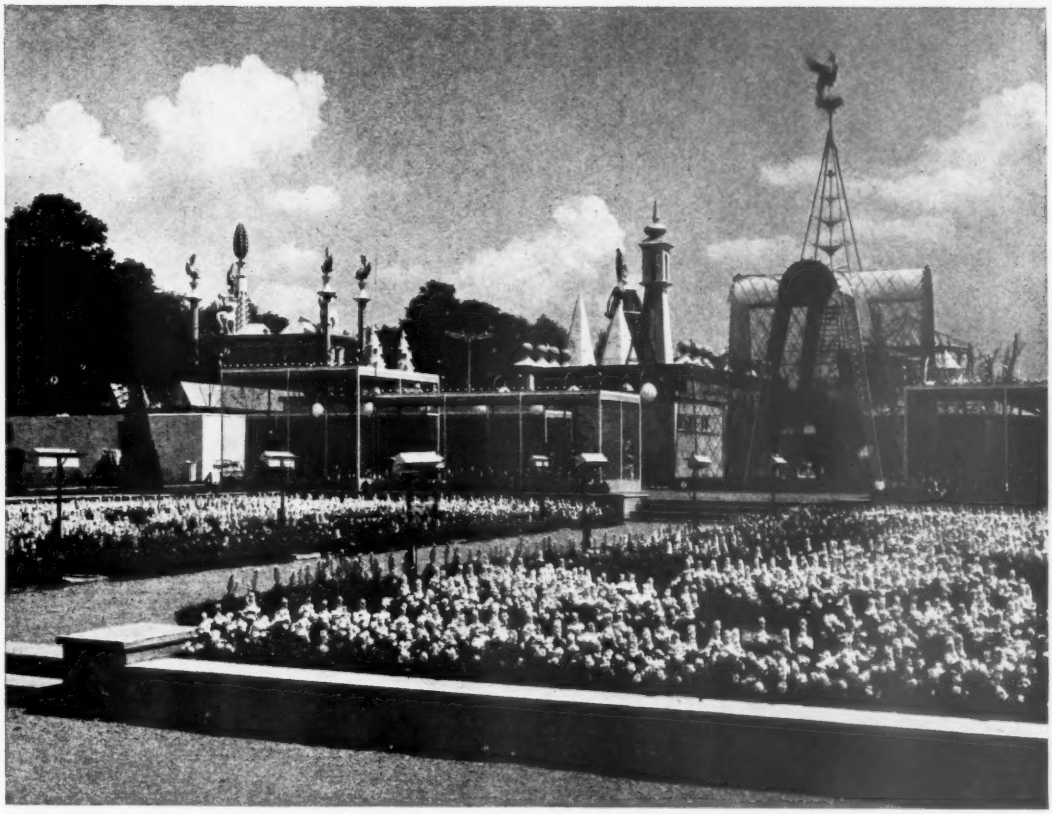
View inside the Dance Pavilion, showing sitting-out bays

The Garden Buffet. Architects: Harrison and Seel [*A/A*]

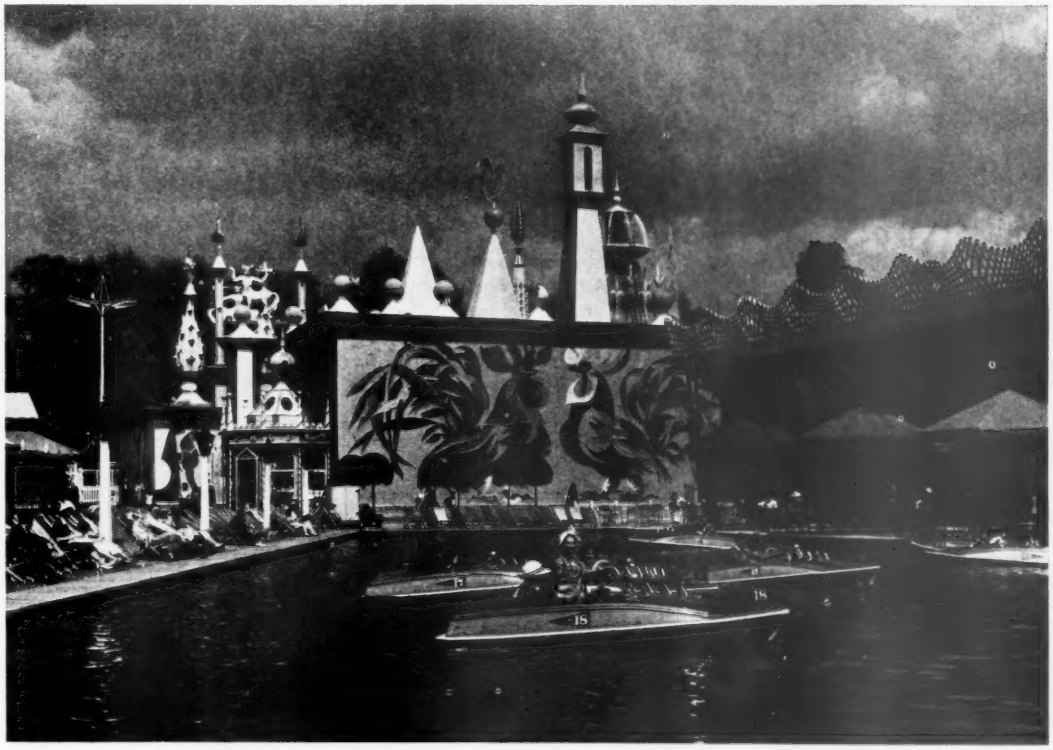
work, which English craftsmen in the 17th century brought to a standard of accomplishment that has never been surpassed. The use of columns adorned with bobbin turning and twisting is a characteristically English form of decoration, and here it is appositely employed.

Of all the buildings in the Pleasure Gardens, the prefabricated structure with bones of tubular scaffolding, the little Riverside Theatre, has a delicate graciousness that links it with the Georgian past, though it has borrowed nothing from any previous period of architectural design, for it possesses that rarest of qualities, originality. For nearly a quarter of a century originality has been used almost exclusively to express brutal statements about ugly facts. In buildings like the Riverside Theatre we can perceive the antidote to the functionalist poison that has been taken so seriously, because it was supposed to be the best curative medicine for the obese vulgarity of form that afflicted late-Victorian and Edwardian architecture and decoration and furnishing.

There is nothing like a little judicious madness for taking people out of themselves, and the sort of craziness that pervades Lewis Carroll's world pops up here and there in the Gardens; and one piece of practical and applied craziness is the Festival Clock, which is an ingenious combina-



Looking towards the Aviary and Children's Zoo, with the towers and pinnacles of the Fun Fair. Designer of the Aviary: James Gardner. Garden designer: Russell Page. Designer of the Children's Zoo: Fred Millet. Architects: Harrison and Seel [*A/A*]



The Boating Pool with a large mural on the Centaur Pavilion. Designer of the Pavilion and painter of the mural: Hans Tisdall

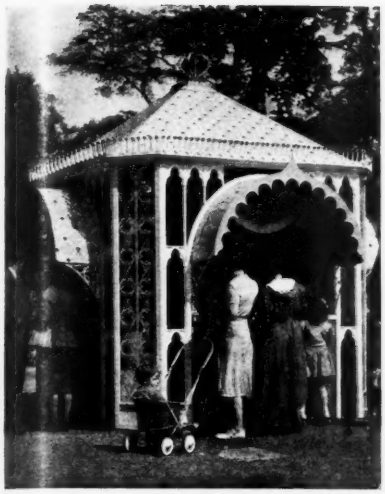
Looking towards the East Gate, along the Parade, from the Tree Walk

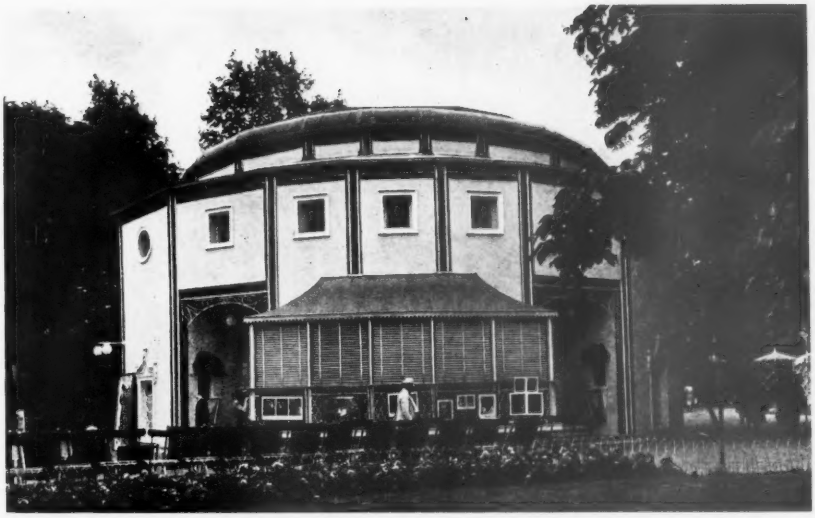
tion of motifs in the Guinness advertising campaigns, and which is full of moving features and appears to attract more crowds than anything else. Then there is the Emett Railway—which takes you into the special and peculiar world which that genius has invented. It has some relationship with the Lewis Carroll world, though it is portrayed to us not with the conscientious realism of Tenniel, but with the sketchy delicacy of a man who sees mechanism through the eyes of an antiquary, and has now written an unforgettable chapter of railway history. A journey on the Emett Railway is an indispensable part of a visit to the Gardens; though foreign visitors will probably regard this—coming as it does from a nation who were and still are the leading railway engineers of the world—as just another example of English lunacy or perfidy or inefficiency or degeneracy—depending, of course, upon their national attitude.

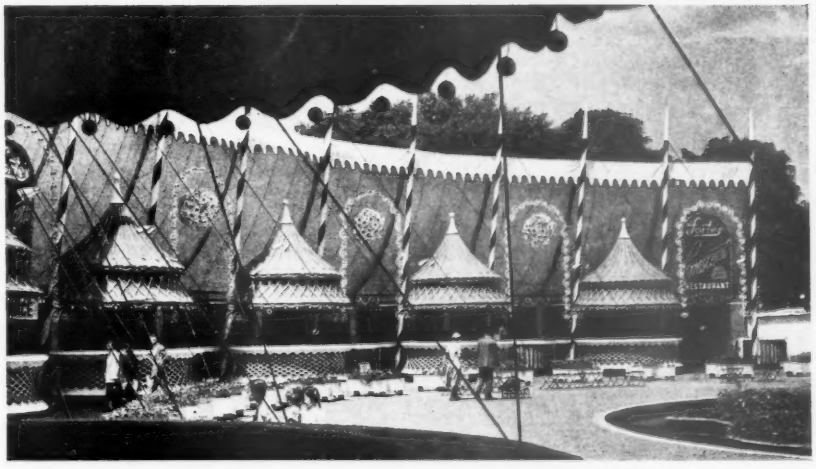
The Fun Fair itself, marked by clusters of variegated towers, minarets, pinnacles and what not, is full of side shows, variously amusing, embarrassing or terrifying, but with nothing improving or edifying. Only in one place in the Festival Gardens are we reminded of the nursery atmosphere of the Welfare State, and that is on the Boating Pool, where directions to the hirers of boats, who are addressed by number, are given over a public address system in accents that are almost but not quite minatory. It is to be hoped that they are constantly disregarded! It is also to be hoped that a little later on notices will be put up everywhere to instruct people to 'Keep off the grass'. This practice used to give the public more pleasure in walking on grass, but there seems little hope that much grass will be available.

Top: a view of the Amphitheatre, showing the proscenium from the Tree Walk. Middle: the brick façade of the Amphitheatre. Architect: Roger K. Pullen, A.A.Dipl. [*F*]

The Festival Clock which tells Guinness time and attracts this crowd all the time. A view from the Tree Walk. Designers of the clock: Lewitt-Him







Above: one of the Kiosks. Top right: the Riverside Theatre—exterior. Middle right: the Riverside Theatre—interior. Designer: Guy Sheppard. Architects: Harrison and Seel [*A/A*]. Engineer: C. V. Blumfield

There are some excellent restaurants, speaking purely from an architectural point of view.

One of the most interesting structures in the Gardens is the Tree Walk, which is routed so that it criss-crosses the Parade and allows you an ape's-eye view, both of the Amphitheatre and the Guinness Clock, as well as a good many unusual aspects of the Gardens and the crowds. A great deal of ingenuity and preparation has been lavished upon this feature, which attracts enormous numbers of people.

The River frontage of the Gardens is a little disappointing. It is at its best by night: by day it suggests that the cash ran out, and the organizers could only afford a few not well chosen flags. The landing stage has also been neglected; and getting a boat from there to anywhere is not easy, because there are no direction signs, and, although there are plenty of boats going hither and thither, the attendants are handicapped in helping passengers because of this lack of signs.

It has been said, all too often, that the English take their pleasures sadly. If the faces of the people in the Festival Gardens are anything to go by, they are not taking their pleasures sadly, but taking them with an astonished air of discovery that such a thing as pleasure not only still exists, but is still allowed.

Editor's Note: The Chief Designer, Mr. James Gardner, O.B.E., R.D.I., was responsible for the main layout, decorations, lighting and co-ordination of designs. The Chief Architects, Harrison and Seel [A/A], were responsible for finalising layouts, detailing site works, services, working up structures from designers' sketches and miscellaneous buildings, etc. Mr. Russell Page, F.I.L.A., was responsible for landscaping.

Right: the Crescent Restaurant. Architect: Patrick Gwynne [*L*]. Engineer: Felix Samuely

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialized branches of research and will willingly answer inquiries.
The Director, The Building Research Station, Garston, near Watford, Herts. Telephone: Garston 2246.
The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow. Telephone: Busby 1171.
The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101.
The Director, The British Standards Institution, 28 Victoria Street, Westminster, S.W.1. Telephone: Abbey 3333.
The Director, The Building Centre, 9 Conduit Street, W.1. Telephone: Mayfair 8641-46.
The Director, The Scottish Building Centre, 425-7 Sauchiehall Street, Glasgow, C.2. Telephone: Douglas 0372.

Research in Sound Insulation. The Building Research Station have in an advanced stage a full-scale experiment in sound-insulating construction. At the Abbots Langley experimental building site—hitherto used by B.R.S. for house-heating trials—they have built three blocks of flats, very appropriately named Rayleigh House, Sabine House and Bagenal House. One of these is of load-bearing brickwork construction, one of 'box-frame' reinforced concrete construction and one of steel frame construction. There are detail variants of construction in each block. These are arranged in sets of four adjacent flats, two on one floor and two above, so that sound transmission through party walls, party floors and by indirect paths can be measured with identical construction on both sides of the sound barrier.

The first block has two groups of four flats, one having joisted floors and the other concrete floors of various common types. The joisted floors consist of light welded open steel joists with timber flanges for nailing and a plasterboard ceiling, skim-coated. The floor above the joists is of 'floating' construction made up in 4 ft. wide timber rafts fastened together (but not to the joists) and resting on an eelgrass quilt. Between the joists there is sand pugging on strips of plasterboard. All the concrete floors are of reinforced concrete (some *in-situ* slab and some various pre-cast types) and having a floating floor above. Bitumen-bonded glass fibre is laid on the structural finish, covered with waterproof paper and then topped with a $2\frac{1}{8}$ in. screed, reinforced with chicken wire. The party walls are of cavity construction to limit direct transmission: strips of bitumen-felt damp-proof course have been built in at successive floor levels to break the continuity of the brickwork and thus limit sound vibrations to that part of the wall exposed to them. In the reinforced concrete building the party walls are solid and there are two forms of finish, illustrated in the accompanying sections. One of these has wood-wool slabs as permanent shuttering and the other inner walls of 2 in. clinker blocks resting on felt pads. The steel-framed structure simulates a portion of a high block of flats in which a steel frame would normally be used.

It is too early to give any hard-and-fast results, though a few general ideas are emerging from the experiment. One is that it is almost impracticable to design a joisted construction that has adequate insulation except at very high cost. Another is that the most troublesome noise seems to be slamming doors.

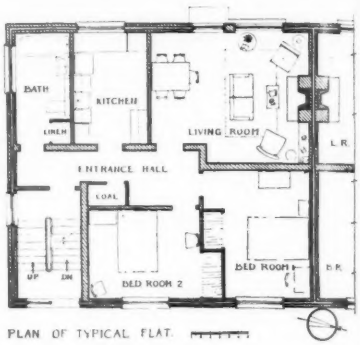
Full measurements are being made with instruments, relative costs are being carefully analysed and, as measurements are completed, families are being moved in who are being asked to make periodic reports of their experiences. As was done with the heating experiments, the families are to be moved round to different flats from time to time. We hope to publish a full report of the first results in a few months' time. Meanwhile this experiment seems likely to provide architects with something they have long wanted, namely, practicable methods of sound insulation in flats related to figures of cost.

Steel Utilization. The Report of the Professional Institutions Committee on improved methods of steel utilization has been presented to the Minister of Works. The R.I.B.A. was represented on the committee first by Mr. M. Hartland Thomas [*F*] and later by Mr. L. W. Elliott [*A*].

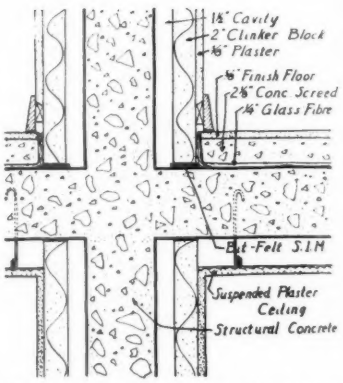
The report reviews the work already undertaken by the professional institutions to discuss and give publicity to improved methods of steel utilization, and notes that the possibilities of encouraging greater use of high tensile steel are being considered. There is also the economy that can result from using steel tubes as structural items in certain types of light buildings. Reference is made to the work being done on the plastic theory of design as applied to structural steelwork, and also to the economies that might be made by the application of that theory in the design of reinforced concrete.

A suggestion was put forward by a member of the committee that an authoritative designer's handbook should be compiled and published at regular intervals; this would constitute a guide to the practical application of the results of research work, and would contain enough information on the comparative merits of various types of construction to enable a designer to choose

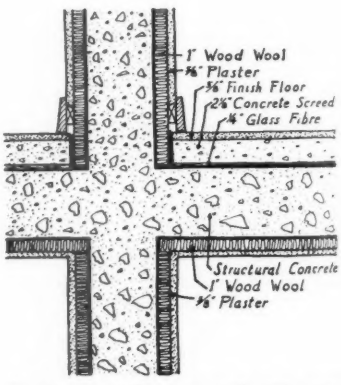
Elevation of the Abbots Langley flats



Plan of the flats



Section through party wall with clinker blocks resting on felt pads



Section through party wall with wood-wool slabs as permanent shuttering

the most economic method of design. This suggestion has been taken up by the British Iron and Steel Federation, who have set up a committee to direct the preparation of such a handbook, but publication is not expected for some two years, owing to the work involved.

The committee hope that interest in the subject will not slacken with the publication of the report, but that on the contrary as a result of the Committee's activities the professional institutions will intensify the work they are already doing.

Ground Floor
Basement
Elevation
Perspective

Quill up to date. In our museums there are splendid examples of calligraphy—the art of beautiful writing—many of them written by monks as a long labour of love. In calligraphy there is an intimate and personal appeal that is lacking in mechanical printing; perhaps that is why our modern Rolls of Honour are so often done by hand, and by the same kind of pen the monks used, the quill. In architectural lettering the prime need is legibility, because the general foreman is concerned with the fact and not the presentation. Yet there are occasions when something a little less utilitarian is not out of place, and for such the quill gives a character all its own; but it needs right and frequent cutting, and that is not an easy task.

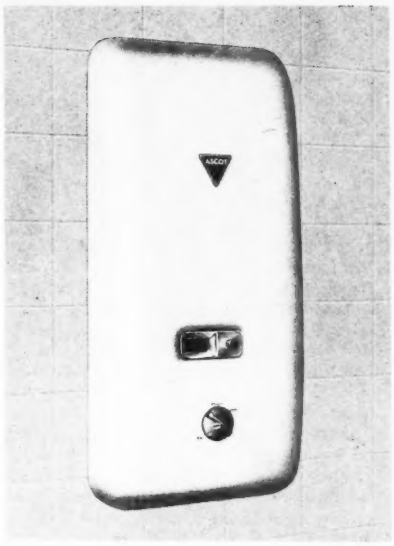
Mr. Graily Hewitt says that 'No one who has learned to cut a quill will ever again be content to use a steel pen for serious work', but even such masters of the art may sometimes like to use a new pen recently produced by Messrs. Mabie, Todd and Co., Ltd., which they call the Swan Calligraph pen. It is a fountain pen, to be filled with specially-prepared 'manuscript ink', and is fitted with a hand-made gold broad nib cut and shaped like the old-time quill, which can be had in different breadths to suit the style of writing required. It is priced at 41s. The JOURNAL has tried the pen in one or two styles of lettering, which are shown on this page; they may interest the many architects to whom lettering is not just 'printing'.

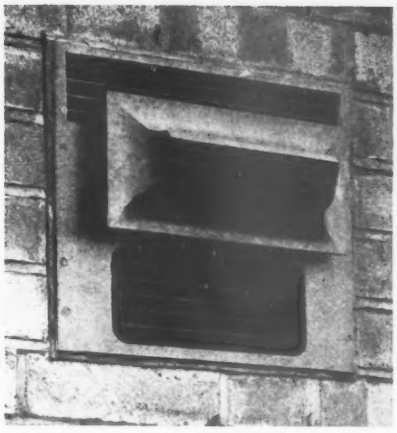
The British Wood Preserving Association. As a symptom of its new and vigorous lease of life the British Wood Preserving Association held its first annual Convention at Cambridge from 25 to 27 June. More than 200 members and guests discussed the problems and techniques of preserving from the ravages of fungus, wood-boring beetles and fire that invaluable and now expensive building material—timber. One speaker succinctly stated the case for employing preservative treatments when he pointed out that the softwood timbers used today in ordinary building had a far higher proportion of sapwood (the natural food of fungi and beetles) and were used in much more slender scantlings than in the old days of cheap and good timber supplies. There was therefore a much narrower margin of safety than heretofore.

Cases were quoted of the roofs of new houses collapsing from beetle attack after as little as 15 months of life, particularly from attack by the furniture beetle, a pest which was said by entomologists present at the Convention to be on the increase. The cost of impregnating all the structural timber in the small house of today is about £10 to £15, and provided impregnation is done after scantlings are cut, permanent immunity from dry rot and beetle attack is obtained. Impregnation by the modern Wolman salts method is odourless and the salts do not stain plaster.

It was, however, pointed out that when the almost inevitable price cutting of a housing contract occurs, one of the first items to go is timber preservative treatment. Nevertheless, the annual cost of remedying defective timber throughout the country amounts to a very large total. Building owners will cheerfully pay annual fire insurance premiums but do not seem yet to have got round to the idea of paying one premium for permanent insurance against structural damage by dry rot and wood-boring beetles.

The danger of decay and damage to timber is recognized in the Technical Section of the Housing Manual just published. While not subscribing to the need for preserving all timber—an arguable case at best—the Manual points out very clearly the places in a domestic structure where damage is liable to start and recommends preventive measures in some detail.





The Ascot balanced flue multipoint gas water heater
Left: the heater
Right: external ventile terminal

A new Ascot Water Heater. The marketing of a heater with a balanced flue is an important step forward in water heating by gas. The term 'balanced flue' means that changes in wind direction and velocity can not affect the speed of air movement through the heater and thus prevents 'downdraught' with the accompanying risk of escape of combustion products into the room where the heater is installed. Further, the heater draws the air for combustion from outside the building.

As will be seen from the accompanying illustrations, the heater is recessed into the outer wall and has, projecting no more than 5 in. into the room, a neat cover which abolishes once and for all the awkward job of cleaning behind a free-standing fitting.

The heater is No. 715 and is obtained from Ascot Gas Water Heaters Ltd., 43 Park Street, London, W.1.

Ductube. In the March 1950 issue of the JOURNAL there was a note describing 'ductube', by which conduit ducts up to 3 in. diameter could be formed in concrete; the method, briefly, being to lay an inflated rubber tube in the concrete while it was being poured, so that on deflation the tube could be withdrawn, leaving a smooth duct in the concrete. The Ductube Company Ltd have now produced a tube of 4 in. diameter, and among other exhibits at a recent field demonstration there were lengths of concrete in which a 4 in. duct had been formed as a drain, connected to a gully and to an inspection chamber. The bore was smooth and true, and would be quite suitable for surface water drainage. In one exhibit the drain had withstood a 5 ft. head water test; the concrete mix being 1 : 4, slump nil.

In comparing the ductube system with ordinary drain-laying, the advantages in favour of ductube are the saving in labour and materials in stoneware or other piping and jointing, avoidance of any badly-made joints, and ease of laying. Drainage regulations normally call for a 6 in. bed of concrete for drain pipes, and sides equal to the external diameter of the pipe, up to a height not less than half the diameter of the pipe, so in using ductube additional concrete would be needed to cover the

duct; but if the system were allowed for soil drainage it might well be that the regulations about the surrounding thickness could be reduced, in which case perhaps the total volume of concrete would be about the same in both methods. There is, of course, the danger that subsidence of the soil would cause a crack in the duct, but that might also happen if piping were used. Porosity of the concrete could no doubt be sufficiently overcome by a good mix, or by the addition of a water-repellent agent. The possibilities of using ductube for the formation of drains, both surface and soil, seem worthy of serious consideration.

As the tubing can be used at least a hundred times, the material costs of the 4 in. tube work out at 1·80d. per ft. as the cost of the tube itself is 15s. per ft. The tubing and accessories can be obtained from the Ductube Company Ltd., 235-241 Regent Street, London, W.1.

District Heating. In March 1948 the Minister of Health set up a working party to consider district heating in relation to public water supplies. This he did owing to representations made to him by the British Waterworks Association, who felt the need for authoritative guidance on problems arising from private bills seeking powers to carry out district heating schemes for the supply of space-heating and hot water. The working party's interim report has now been issued by the Ministry of Local Government and Planning.

This interim report is confined to two aspects :—(*a*) the probable effect of district heating on the quantities of water to be supplied by water undertakings, and (*b*) the division of responsibility between water undertakings and district heating authorities. Other aspects have received preliminary consideration, but will be dealt with in a further report.

The report deals with direct and indirect supply; the term 'direct supply' being used to indicate a system in which hot water can be drawn by consumers direct from the mains of a statutory heating authority, who thus supply both water and heat. An indirect system is one in which steam or hot water from the mains of the heating authority is used to heat water through heat exchangers in the premises of the consumer. The working party thought it probable that the provision of abundant domestic hot water from a central source, that is, either direct from the mains of a heating authority, or from a large calorifier serving several dwellings, would result in a greater consumption than would be the case where water is heated in individual appliances in each dwelling, and the consumer is responsible for the cost of the fuel.

The report states that the working party were unanimous in recommending that district heating schemes should be designed for indirect distribution by the 2-pipe or 3-pipe system, and if practicable with a separate calorifier or indirect cylinder in each dwelling.

The report contains some interesting tables showing the consumption of hot and cold water in different systems; this information being derived from statistics supplied by over 20 water undertakings. The report is called *District Heating Working Party. Interim Report*, and is published by H.M. Stationery Office, S.O. Code No. 75–2, price 6d. net.

Uplift in Building. Seeing is believing, especially when it is on the unimpeachable authority of a coloured film, annotated by an American architect with a dry wit and a genius for making shrewd remarks in an ingenuous manner. The occasion was the showing of a film demonstrating the American Youtz-Slick system of lifting and placing complete floor and roof slabs, and the commentator was Mr. O'Neil Ford, who has come over here to explain the system.

The essence of the system is this: steel angles welded together to form rectangular stanchions are erected and special hydraulic jacks are fixed on top. Collars with guide-holes are threaded on the stanchions. Reinforced concrete floors, fitting exactly between the stanchions, are then cast on the ground and the collars are incorporated in the slabs. The jacks operate rods which pass through the collars, and by this means the floors are raised into position, when metal plates are welded to the stanchions to support the slabs. Suspended formwork is not needed, as only edge boards are required to contain the slabs when the concrete is being poured, and thus time and expense are saved. Several floors, separated by building paper, can be cast at ground level on top of the surface concrete and, when cured, can be lifted one by one.

The demonstration was arranged by the courtesy of Messrs. W. H. Colt (London) Ltd., and Mr. R. Fitzmaurice [*Hon. A*] occupied the chair.

Book Reviews

Heat Insulation, by *Gordon B. Wilkes.* 8½ in. vii + 224 pp. text illus. New York: John Wiley; Lond.: Chapman and Hall. [1950.] £1 12*s.*

Thermal insulation is in the news. Fuel crises are recurrent; for such fuel as we can get we have to pay an ever-increasing price. How important it is, then, to take every reasonable step to retain within our buildings the heat so dearly bought: important both for the comfort of the inhabitants and for its profound effect on our national recovery.

A book, therefore, which gives us a great deal of information on this subject must be of much value. This is such a book.

The author tells us in his preface that he has made no attempt to produce a text book, but rather to bring together in one volume some of the miscellaneous information on heat insulation. This appears to be a very modest appraisal of his work, for it covers very completely the whole field of the subject, both from the point of view of the scientist and research engineer, and the architect or technician who is responsible for the practical application of the research. And, indeed, no one could be better qualified to write such a book, for he has studied the problems involved for some forty years.

In particular there is an excellent chapter on reflective insulation. Very little written information on this subject has hitherto been available. Some of the little which has been written has been inaccurate, some the subject of controversy. It is an important subject, for reflective insulation can in some cases offer appreciable economies over other types, with no less efficiency: yet, if not properly used, it can be valueless.

Another chapter which is of particular interest is that on moisture in insulation. In this is included information on the prevention of condensation on cold surfaces in buildings, as well as within walls. The dangers arising from the latter have recently come to be generally recognized: decay of wood or corrosion of steel supports may result. The dangers are greater in an insulated wall, where the insulation is misplaced, than in an uninsulated one. Here is the information which will make it possible to avoid such pitfalls.

There are also useful tables and diagrams giving 'U' value calculations, and similar information. In all, I think it a book which could well be read by all architects and students interested in heat insulation: and this, I venture to suggest, in these hard times, should mean them all.

HENRY G. GODDARD [*F*]

A History of Architecture, by *H. Heathcote Statham.* 3rd ed. [of A Short Critical History of Architecture], by *Hugh Braun.* 8¾ in. viii + 296 pp. + pls. Batsford. 1950. £1 1*s.*

Heathcote Statham's excellent book, *A Short Critical History of Architecture*, was published first in 1912. It was revised and enlarged by Maxwell Aylwin in 1927, and has now been brought up to date by Hugh Braun.

The task of revising a general history is no light undertaking. The original book may be taken apart section by section and then reassembled with material drawn from subsequent research built into the new fabric. If absolute authenticity in the light of present-day knowledge is the main objective, then this is probably the only sure method, but it requires a team of specialists and is a laborious business. Moreover the character of the original may easily be changed in the process, and the resulting book become virtually a new work. Another plan, that adopted by the present reviser, is lightly to prune the original, correcting any errors that catch the eye, and to graft on to it such material as is considered necessary to bring the work up to date. This is quite a good method for a book of this kind, and the reviser has treated his author with the greatest respect. Mr. Braun emphasizes in

his preface that he had difficulty in subordinating his own views on some of the problems involved, but he has exercised commendable restraint throughout. Statham, therefore, is still very much Statham, except for a few pages at the end. (Incidentally, it is claimed on the jacket that there is a 'fresh introduction', but this appears to be a mistake, since the nine pages of the previous edition have survived intact. The preface is new.)

It is evident that Mr. Braun found little to question in his predecessor's scholarly and eminently readable thesis, for there are not many modifications to the text. Some dead wood has been cut away of course, and one of the most praiseworthy deletions is the running commentary that formerly appeared at the top of every page—surely one of the most irritating of irritating inventions.

The principal additions to the book, however, are disappointing. Two new pages are devoted to colonial architecture, but the exposition of this theme may well be a little confusing to the layman. There is, too, some ambiguity in the use of the term 'monumentality', which is not synonymous with bigness, and the expressions 'stripped style' and 'stripped technique', freely employed to denote buildings in the modern manner, fall harshly on the ear and do not seem to convey adequately the author's meaning. Then again Statham's last chronological table entitled 'From the Renaissance to the Present Day' might have been brought up to date. It still ends at 1850, and so, unfortunately, does the main interest of the book. Less than four pages are devoted to events subsequent to 1850, and the reader will be obliged to look elsewhere for the succinct and objective analysis of more recent developments that he would expect to find here.

Despite these criticisms, Statham remains one of the most readable and useful of the standard history books, and, though lighter in weight and less academic of mien than hitherto, is worthy of a place in the library of every student of architecture, professional or otherwise.

THOMAS HOWARTH [*A*]

What is Modern Design ? by *Edgar Kaufmann, jr.* (Museum of Modern Art, New York: Introductory series to the modern arts, 3.) 10 in. 32 pp. text illus. New York. (Obtainable from Penguin.) [1950.] $1.00.

By the title of this elegant little book you will know exactly what to expect. First comes a brief sermon on the essentials of good design, very simply written and happily free from the patronizing tones rather too common in works of this sort. The layman, one hopes, will profit by reading it. Architects, of course, do not need to be reminded about such things—or so I assume. There follows a selection of photographs of furniture, textiles, pottery, glass, lamps and metal ware, illustrating the author's precepts. A sensibly short bibliography is provided.

J. C. P.

Prestressed Concrete, by *Gustave Magnel.* (Concrete series.) 2nd ed. 9½ in. vii+300 pp. text. illus. Concrete Pubns. 1950. 15*s.*

Rapid development in prestressed concrete technique has necessitated a second edition only two years after this book first appeared. The latest volume contains 80 additional pages and 100 more illustrations. New matter includes the design and construction of multi-storey framed buildings, continuous beams, and several bridges. Other minor revisions and enlargements have also been made.

A Course of Reinforced Concrete Design, by *Thomas J. Bray.* 2nd ed. 10 in. viii+221 pp. + 27 pls. text illus. Chapman & Hall. 1950. £1 10*s.*

The needs of students of reinforced concrete have been carefully studied in the preparation of this book, which now appears in revised form, clearly illustrated with diagrams, graphs and charts. The author has also borne in mind the reference requirements of the practising structural engineer. The text is attractively set out and the treatment is simple, although not elementary. An appendix summarizes the recommendations and implications of B.S. Code of Practice CP.114 (1948).

Explanatory Handbook on the B.S. Code of Practice for Reinforced Concrete, *&c.*, by *W. L. Scott, W. H. Glanville,* and *F. G. Thomas.* (Concrete series.) 9¾ in. viii+119 pp. text diags. Concrete Publications. 1950. 9*s.*

Based on the Handbook by Scott and Glanville on the D.S.I.R. Code of Practice of 1934, the new volume is a completely revised work dealing with the B.S. Code for the Structural Use of Normal Reinforced Concrete in Buildings issued in 1948. The Code is reproduced in full with the authors' comments following the clauses. The book is one of the familiar and useful 'Concrete Series'.

Building and Public Works Administration, Estimating and Costing, *&c.*, by *Spence Geddes.* 3rd ed. 9¾ in. 288 pp. text illus. Newnes. 1950. £1 10*s.*

First published in 1946, this useful general reference book has been revised and augmented, and seems to contain a great deal of information which is not readily available elsewhere—certainly not in a single volume. The problems of architects, engineers, surveyors and students, as well as of builders and contractors, have been considered. J.C.P.

The Story of Scots Architecture, by *Ian Finlay.* 7½ in. 64 pp. text illus. Edinburgh: Douglas & Foulis. 1951. 3*s.* 6*d.* (School ed. 2*s.* 6*d.*).

Four broadcasts, apparently to the young, and twenty-odd thumb-nail sketches make a simple history from prehistoric brochs to Charles Rennie Mackintosh and Patrick Geddes, reasonably claimed as among the originators of present-day architecture and sociological town and country planning. The colliery buildings at Comrie and a group of miners' cottages illustrate Scotland's contemporary contribution. H.V.M.R.

The Building Owner and Planning In Advance

Joint Statement by the Royal Institute of British Architects and National Federation of Building Trades Employers

Arising from their examination of the recommendations contained in the Reports of the Building Industry Working Party and the Building Productivity Team which were issued last year, the R.I.B.A. and the N.F.B.T.E. deem it desirable to draw general attention to the importance of adequate planning in advance as a means of securing economy in building construction cost and, conversely, to the serious effect on costs and efficiency (*a*) of failure, before operations begin, to determine exactly the work to be carried out, and (*b*) of any alterations of plan during the course of the work. It is felt that to re-emphasize the importance of the principles laid down in the two Reports is particularly appropriate at the present time not only for the assistance of private building owners but also for the guidance of the Government Departments responsible for constructional work under the defence programme.

The experience gained during the years 1938-45 should have proved conclusively to the Government Departments concerned that failure to plan in advance and frequent alterations of plans whilst work was in progress not only delayed considerably the completion of contracts but led to heavy additional costs. There are already signs, however, that in the rush to carry out the new defence programme the lessons of the past are in danger of being forgotten.

The Royal Institute of British Architects and the National Federation of Building Trades Employers wish therefore to appeal to all building owners, Government Departments and Local Authorities as well as industrial concerns and private individuals, to heed both the lessons of the past and those to be learned from the valuable study

of constructional practice and procedure in the United States of America which was made by the Productivity Team. Further, they desire to call upon each architect and each contractor to regard it as his individual responsibility to take whatever action is open to him to prevent the adoption of a procedure in respect of any individual job which is likely to delay completion and to increase costs.

The Productivity Team found that in the United States the architectural profession has in general been more successful than it has in Britain in convincing clients of the importance of (i) advance planning, (ii) strict adherence to a plan once determined. There is a greater appreciation in the United States of the fact that, within reason, the longer the time that is spent in the preparation of a building project the shorter will be the time that will be required for the actual construction and, secondly, that as time spent in construction is more costly than time spent in planning, money is likely to be saved rather than wasted by thorough preliminary planning. Although American building owners are equally, if not more, anxious than British building owners to make their building schemes revenue-producing as quickly as possible, it is indeed not unusual in the United States for the planning stage to be considerably longer than the constructional stage.

A prerequisite to successful advance planning is the establishment of a complete personal understanding between architect and client, to the end that the latter, appreciating that the architect he has selected is fully cognizant of all the economic factors involved in the project, is willing to accept his advice on the various issues which arise in the planning of any building.

That feeling of confidence having been established, it should be possible for the client and the architect to determine definitely the nature and extent of the services and accommodation required. For this purpose the client must provide the architect with a definite statement of his requirements and of the total financial outlay he is prepared to make. The architect must be allowed sufficient time to consider fully the various alternative schemes that may be suitable and to prepare tentative sketch plans and possibly perspective drawings. It is very important that the agreement reached upon the client's exact requirements and wishes should be as definite as it is possible to make it. Thereafter the client should be restrained, as firmly as possible, from indulging in after-thoughts.

The detailed planning of the job by the architect can then begin. It is at this stage that the danger of over-impatience on the part of the client is liable to arise, because, being unaware of the various operations that have to precede the invitation of tenders and the letting of the contract, he is inclined to exert the utmost pressure upon the architect to provide visual proof that the agreement reached as to his wishes is being translated into actual bricks and mortar on the site.

The importance of supplying the builder at an early stage with full working drawings and all relevant information has been so fully emphasized in all discussions of the two Reports that it is not necessary to develop it in this Memorandum. It should, however, be remembered that, in order to prepare accurate bills of quantities, the quantity surveyor must receive the drawings etc. from the architect at a still earlier stage. Failure to provide the quantity surveyor with this information reduces the preparation of bills of quantities from the status of an exact science to that of an exercise in intelligent anticipation of an architect's intention. However successfully quantity surveyors' recent experiences may have developed such a sense in them, it must surely be appreciated that their professional training, and the present contractual practice of the industry, is based on the assumption that bills of quantities are accurate.

The client must be educated to realize also that the selection of the contractor does not mean that work on the site will begin immediately. It is necessary that the contractor should be given sufficient time, varying according to the size and the nature of the contract, to place sub-contracts, order materials and generally to organize the progress of construction. And, if he has not received them at the tender stage, the contractor should be supplied with full working drawings, including all details, before he is instructed to begin work.

Finally, the client must realize, in his own interest, the importance of adhering to the scheme which has been agreed with the architect and of refraining from insisting upon alterations or variations which are, in the words of the American Architect's Handbook, 'a source of delay, annoyance and loss to all parties.' A lay client may find it difficult to realize the extent to which the progress of a job may be dislocated by what appears to him to be a comparatively minor alteration; the extra cost to himself he may be prepared to ignore—until the accounts are presented for settlement. The architect should therefore make it clear to the client that any change of mind on his part will be costly both in money and in time, and the amount of the extra time and money involved should in all cases be estimated and submitted to the client as accurately and as clearly as possible.

The duties of the client were summarized 20 years ago by the International Building Congress held in London in 1930 in the following terms:

1. He should provide definite information at the earliest stage which will enable his requirements to be gauged accurately by the architect, both as to design and as to price.
2. He should co-operate with the architect and the successful contractor in endeavours to foresee possible difficulties and their solution, and to envisage possible savings in cost and time.
3. He should be prepared to adhere to an understanding that, once the design, plans and specifications are settled, there shall be no major deviation therefrom and changes of mind, even on details of decoration, which involve delay or possible dislocation of arrangements.
4. He should appreciate that failure on his part to co-operate, with the object of unifying control and allowing the architect and the contractor to 'pull in the same boat', really means loss of opportunity to reduce costs—in other words, that it is he who pays, in the long run, for disunity of purpose.

It was pointed out that: 'much education is necessary if such a consummation is to be achieved, but much may be accomplished if a lead be given by Government Departments and Local Authorities, which together are the largest building owners in the country, and by other large corporations and organized property owners.'

The conclusions are as worthy of attention today as they were at the time they were made. The need for greater efficiency in the constructional industry is certainly more pressing. It is believed that those engaged in the industry are coming to realize their respective responsibilities; it is the duty of all to see that the building owner realizes his.

Correspondence

LIGHTING OF PICTURE GALLERIES

Sir,—Mr. French is doubtless unaware that the problem of reflection in galleries has been considered by the Station in its general research programme, which is related to gallery lighting, and it is hoped to be able to publish conclusions on this point. It will be clear that the Station's proposals for background colours for walls in galleries reduce the contrasts to a low level and thus do make a contribution to reducing the reflection. Apart from this, the most complete solution is to remove the glass entirely from the pictures and to protect the latter from deterioration with the aid of air-conditioning. It is understood that many gallery directors hold this view and would prefer to act in this direction. There would be exceptions where pictures are especially fragile or liable to be soiled, such as might happen with drawings, and the suggestion to remove the glass might not, of course, be acceptable in these cases. It would need then some rearrangement of planning to exhibit them in rooms not prone to the reflection problems of the large top-lit gallery.

There are other alternative possibilities; that outlined by your correspondent is one, another is the use of curved glass on walls rather like modified, very shallow shop windows. From more than one aspect we have noted that measures taken to reduce annoyance from reflection have often caused more annoyance than they cured!

W. A. ALLEN, B.ARCH. [*A*]
Building Research Station, Watford.

Practice Notes

Edited by Charles Woodward [*A*]

IN PARLIAMENT. The Chancellor of the Exchequer, in making a statement on the defence programme in the House of Commons on 21 June said: The general reduction in the level of civil investment will unfortunately have to continue for some time. Architects, engineers and other professional and technical staff are urgently required now to deal with the large and sudden increase in the planning of defence works. The Government hope that all employers who possibly can will release staff—especially those engaged on long-term civil projects—for this much more urgent defence work.

BUILDING LICENSING. The Minister of Works has made an Order which continues in force the present exemption limits below which work can be done without a building licence or authorization.

During the period 1 July 1951 to 30 June 1952 work may be done on any property without a building licence if the cost of the work, together with the cost of any previous work carried out on the property without a licence in the period, does not exceed £100 or, in the case of 'designated buildings', £500. The definitions of the two classes of 'designated buildings' are unchanged and cover, generally speaking, buildings used or intended to be used for industrial or agricultural purposes. (The Control of Building Operations (No. 16) Order, S.I, 1951, No. 1082, obtainable at H.M. Stationery Office, price 3*d*.)

MINISTRY OF LOCAL GOVERNMENT AND PLANNING. Coal-Mining (Subsidence) Act, 1950. Circular 42/51 dated 4 June 1951 calls the attention of housing authorities to this Act and states that the general effect is to require the National Coal Board to carry out or pay for the repair of structural damage (evidence of which appeared on or after 1 January 1947) due to coal-mining subsidence to dwelling houses (houses, flats, maisonettes or parts of buildings used as dwellings) having a rateable value of £32 (in Scotland £52) or less. The Circular deals with the application of the Act to houses with which local authorities are concerned.

The Circular states that with regard to requisitioned property it is not considered that subsidence due to mining operations is damage for which compensation is payable under Section 2(1)(b) of the Compensation (Defence) Act 1939. Where serious damage occurs to property held under requisition the local authority is advised to consider releasing the property from requisition, leaving the owner to treat with the National Coal Board. If the property is not proposed to be released the authority should immediately advise the owner of the provisions of the Act, so that he may deal direct with the National Coal Board.

Control of Advertisements. The Minister has amended the Control of Advertisement Regulations in respect of flag advertisements. A Class V has been added to the 1948 Regulations which reads as follows:

'Any advertisement in the form of a flag which is attached to a single flagstaff in an upright position on the roof of a building, and which bears no inscription or emblem other than the name or device of a person or persons occupying the building.'

An advertisement which complies with this class may be displayed without prior application for consent to the local planning authority (S. 1. 1951. No. 1,038, The Town and Country Planning (Control of Advertisements) Amendment Regulations 1951, H.M. Stationery Office, price 2*d*.) This Amendment came into operation on 1 July 1951.

BILLS OF QUANTITIES. Purchase Tax. The R.I.C.S. calls attention in the JOURNAL for June to Purchase Tax (No. 1) Order 1951. The present position is that a quantity surveyor who reproduces bills of quantities in his own office is not required to register for purchase tax if:

(*a*) the paper which he uses is tax-paid either on purchase or after cutting by another person; and

(*b*) the bills of quantities reproduced on that paper are to be used solely in connection with professional services performed by that quantity surveyor.

It is suggested that these conditions are probably fulfilled by most quantity surveyors, but those who are in any doubt would be well advised to consult their local officer of Customs and Excise.

DISTRICT HEATING. The Minister of Health set up a Working Party in March 1948 to consider district heating in relation to public water supplies.

'Interim Report of District Heating Working Party' is now issued by the Ministry of Local Government and Planning and is obtainable at H.M. Stationery Office, price 6*d*.

The Report unanimously recommends that all district heating schemes should be designed to supply heat and hot water by the indirect rather than by the direct method.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY. Trades' Charge-Hands. As from 11 June 1951, the following amendment to National Working Rule 1 became effective :

'Trades' Charge-Hands appointed as such by their employer, shall, while so employed, be paid not less than 2*d*. per hour above the standard rate of Craftsmen.'

MINISTRY OF WORKS. Asbestos Cement. The Ministry have authorized Messrs. Atlas Stone Co. Ltd. to increase current selling prices of Asbestos Cement building materials by 9 per cent. The increase will apply to all deliveries on and after 11 June 1951.

Roofing Felt and Damp-course prices. The Ministry have agreed selling prices of roofing felts and damp courses made to B.S.S. by members of the Association of British Roofing Felt Manufacturers. The prices represent an increase of about 11 per cent on the overall current prices, the overall result being secured by applying varying increases to the different types of products. (P.I.73. M.O.W. 64/51, dated 15 June 1951.)

Review of Films—24

The country of origin and date of release are given first. The film is in monochrome unless otherwise stated. The sizes (35 *mm. and* 16 *mm.*) *are given. Sound films are marked* '*sd*', *and silent* '*st*'. *The running time is given in minutes.*
(*F*) *indicates free distribution.*
(*H*) *indicates that a hiring fee is payable.*

The Schindler House
Britain 1945 (*F*)

Summary. Method of erecting the Schindler permanent prefabricated house. General views of houses; shots of site factory; manufacture and erection of prefabricated parts; brick party walls, heating unit; special aluminium scaffolding for easy handling; three pairs of houses built at a time for economy; uses of concrete; breeze block first floor party walls, 4½-in. brickwork outer skin; heating by open fire in sitting-room with warm air ducts to bedrooms.

Appraisal. A very fair record film which, however, suffers from a lack of continuity. The photography is not very good and the film needs re-editing. The captions are clear but would have been more valuable had the information been more detailed.
16 st. 25 minutes. Film Library, Ministry of Works, Lambeth Bridge House, London, S.E.1.

The Ten Year Plan

Britain 1945 (*H*)
Summary. The story of a reporter who is sent to gather information about prefabrication. He visits various towns in an endeavour to find out the type of houses people want to live in. Examples of steel-framed houses in Scotland are shown, and details of the British Iron and Steel Federation houses at Northolt.
Appraisal. A film of general interest. It is apt to give the impression, however, that the B.I.S.F. method of building houses is the only way of solving the housing shortage programme. A short survey of other methods as an introduction would have created greater interest.
16 sd. 20 minutes. G.B. Film Library, Aintree Road, Perivale, Middlesex. (*Ref. No.* H.2783.)

HOUSING ACT 1949. Improvement of Housing Accommodation. With Circular 4/51 issued by the Ministry of Health were Practice Notes on housing improvement subsidies under the above Act and what constitutes 'Improvement of Dwellings' (i.e., improvement works other than the provision of dwellings by conversion). The provisions of the Housing Act were epitomized in the JOURNAL for October 1949 on page 539, together with Circular 90/49 issued by the Ministry.

The Practice Notes issued by the Ministry are intended to make clear what works come within the scope of the Act.

Works within the scope of the Act.

(*a*) Provision of bathrooms where none exist and indoor sanitation.
(*b*) Additional bedroom or living accommodation reasonably necessary to meet the requirements of the family occupying the house after the works are completed, i.e., to relieve overcrowding or to allow proper segregation of the sexes.
(*c*) Additional bedroom accommodation built over other approved improvement works, e.g., a scullery or bathroom (but not a garage) may be allowed irrespective of the size of the family.
(*d*) Conversion from cesspool to main drainage; provision of septic tank; privy conversion, etc. The enlargement of a cesspool can not be regarded as improvement work unless it is necessary to take additional drainage from new baths, w.c.'s, sinks, etc.
(*e*) The cost of installing water, gas or electricity in a house should only be admitted where a mains supply is either already available, or there is definite information that it will be available in the very near future, or in connection with a new private source of supply.
(*f*) Works necessary to eliminate inherent structural defects, e.g., the provision of a damp-proof course where this is the only effective remedy against rising dampness; excavation around the building; new ground floors where the existing floors consist only of rammed earth, bricks or stone flags, etc.; the raising of the levels of ceilings, the lowering of the levels of floors and, if necessary, works in connection with the raising of the level of the roof to obtain a minimum length of 7 ft. for habitable rooms; a new staircase where the existing staircase is entirely inadequate or is necessary on account of a desirable replanning of the dwelling as part of the proposed improvement.
(*g*) The installation of a hot water system, domestic washing facilities including a sink and washboiler. Heating appliances should be of the approved types in the list issued as a Supplement to Circular 170/48.
(*h*) The provision of new windows as part of the improvement work, e.g., to a new bathroom, bedroom, larder, etc., or to increase the window size to comply with byelaws, but not otherwise.
(*i*) The rebuilding of a single storey back addition where necessary for the carrying out of improvement works over it.
(*j*) The provision of well-ventilated larder and storage cupboard accommodation in accordance with the standards laid down in the Housing Manual.
(*k*) All works necessary for improvement, repair, maintenance and replacement in the case of the conversion into a dwelling or dwellings of buildings other than houses.
(*l*) The provision of a proper surfaced path from a house to the domestic out-buildings and the paving of small areas at the rear of buildings. Where the house is situated some distance from the nearest road or highway the reasonable cost of a path (on land owned by the applicant or held by him on lease with not less than 30 years to run) from the house to the road, but not a surfaced road to accommodate vehicles.
(*m*) The provision of a new well whether or not a well previously existed.

Works not within the Scope of the Act:

(*a*) Works which have been commenced prior to obtaining the formal approval of the local authority under Section 20 of the Act.
(*b*) Works to 'tied' houses. If assistance is given a proper tenancy must be created which will give the tenant the full protection of the Rent Restrictions Acts against summary eviction in the event of the employment terminating.
(*c*) Works to houses erected with the aid of subsidy, notwithstanding that the subsidy may have ceased to be payable.
(*d*) Works to houses erected since 1945.
(*e*) The reconstruction or conversion of houses or other buildings of which only ruins or remnants of walls remain, or works consequent on war damage or damage by fire.
(*f*) Works to houses, the habitable rooms of which are below 7 ft. in height and can not be brought up to this height. Exceptions may be made in the case of a house of special historic or architectural merit; or where there are exceptional compensating features to offset this defect.
(*g*) Works to houses in which bedrooms would still be inadequately ventilated owing to the relative positions of doors, windows and flues.
(*h*) The widening or cleaning out of an existing well.
(*i*) Connections to water, gas or electricity mains or to sewers over land not owned by the applicant or held by him on a lease with less than 30 years to run.
(*j*) The enlargement or repair of cesspools.
(*k*) Replacements not necessitated by replanning consequent upon the improvement works (including the reinstatement of any existing fittings and equipment, cookers, sinks and drainers, fireplaces, etc.).
(*l*) Works carried out to that part of a dwelling which is used for business purposes.
(*m*) Tiling of walls of bathrooms, kitchens or sculleries, or any other works or fittings in excess of a reasonable standard.
(*n*) Works to houses converted into flats with a common staircase and entrance, where the flats will not be entirely self-contained.
(*o*) Works to dwellings which will not be entirely self-contained.
(*p*) Works to dwellings where any part of the external walls will not be weatherproof, e.g., 4½ in. brick.
(*q*) The improvement of 'hostels'.
(*r*) Works to almshouses unless after the execution of the works they will be separate dwellings fully complying with the requirements of paragraph 9 of Appendix III to Circular 90/49.
(*s*) The conversion of dwellings to which conditions contained in the Housing (Rural Workers) Acts, 1926 to 1942, for the time being apply. (See section 28(1) of the Housing Act 1949.)

Standard Conditions of Tender

for Nominated Sub-Contractors and Nominated Suppliers

Explanatory Note

In the belief that conditions of tender for nominated sub-contractors and nominated suppliers require standardization, the Quantity Surveyors' Committee of the Royal Institution of Chartered Surveyors has prepared the following documents:

(1) A standard form of tender for nominated sub-contractors.

(2) A set of notes for guidance in the use of the nominated sub-contractors' form.

(3) A standard form of tender for nominated suppliers.

(4) A set of notes for guidance in the use of the nominated suppliers' form.

These documents were then submitted to the R.I.B.A., and, after consultations between the two bodies, are now published in the journals of the R.I.B.A. and the R.I.C.S. for the information of their respective memberships. The use of these documents is in no sense mandatory upon members, but is commended by both bodies in the hope (*a*) of securing greater uniformity in conditions of tender, thus enabling a truer and fairer comparison of estimates to be made; and (*b*) of ensuring that the conditions of the tender do not conflict with the conditions of the principal contract.

The need for flexibility in the sub-contractors' form has been borne in mind, so that it can be used for tenders based either on bills of quantities (such as tenders for asphalt floor finishings) or on specification only (such as tenders for lifts and ventilating systems).

It is suggested that any member who decides to use these forms should make his

own copies for his own office purposes. The question of the forms being printed and distributed by the R.I.B.A. and R.I.C.S. will be considered only if a sufficiently large demand becomes apparent.

1. NOMINATED SUB-CONTRACTOR FORM

Reference.....
To the Principal Contractor.
TENDER for.....at.....for .....
Architect.....
Quantity Surveyor.....
* Principal Contractor.....

** This tender is subject to confirmation after the appointment of the principal contractor.*

We undertake to execute and complete the works described or referred to in the drawings, specification and/or bill of quantities in accordance with the general conditions and preliminaries for the sum of..... (£ : :).

Our tender is subject to adjustment for any variation ordered in conformity with the terms of the principal contract and/or in accordance with the term of the fluctuations clause of the general conditions and preliminaries.

We undertake to commence the works at such time as the principal contractor may require but not less than.....weeks from the date of the official order and to complete the whole of the works within.....weeks from the date of commencement.

We agree that this tender shall be open for acceptance within.....weeks from the date given below.

For and on behalf of.....
Address .....
Signature .....
Date .....
To be returned to .....

GENERAL CONDITIONS AND PRELIMINARIES

Site Information

1. Location of Site.....
2. Access to Site.....
3. Order of Work.....

Sub-Contract

The sub-contractor will be required to enter into a sub-contract with the contractor in accordance with the terms and conditions of the principal contract relative to sub-contractors.
The form of the principal contract and the drawings may be inspected at the office of .....

Extracts from Principal Contract. The following are extracts from the conditions of the principal contract, but in no way absolve the tenderer from his responsibility to examine same.

4. Date for Completion.....
See Clause(s).....
5. Damages for Non-completion. At the rate of £.....
See Clause(s).....
6. Defects Liability Period.....weeks from Date of Completion.
See Clause(s).....
7. Payment.
(*a*) Period of Interim Certificates.....
See Clause(s).....
(*b*) Period for Honouring of Certificates.....
See Clause(s).....
(*c*) Percentage of Certified Value Retained .....
See Clause(s).....
(*d*) Limit of Retention Fund.....
See Clause(s).....
(*e*) Release of Retention Fund.....
See Clause(s).....
(*f*) Discount.....
See Clause(s).....
8. Dayworks .....
9. Fluctuations .....

Preliminaries

10. Unloading, etc.....
11. Storage Space.....
12. Scaffolding, Plant and Hoisting.....
13. Materials to be provided free by Principal Contractor .....
14. Lighting and Power.....
15. Casing up and Protection.....
16. Welfare .....
17. Licences and Permits.....

2. NOTES FOR GUIDANCE IN USE OF NOMINATED SUB-CONTRACTORS' FORM

All items listed below are to be completed by the firm sending out the enquiry. Specification and/or bill of quantities to be attached to the form of tender together with any necessary drawings.

TENDER

Reference. For contract number or similar reference. *Tender for* . . . Description of work. *at* . . . Name of contract. *for* . . . Name of building owner. *Architect.* Fill in name and address. *Quantity Surveyor.* Fill in name and address. *Principal Contractor.* If principal contractor is known fill in name and address and delete note under. If principal contractor is not known state 'Not Known' and preserve note under. *To be returned to* . . . Architect, quantity surveyor or principal contractor.

GENERAL CONDITIONS AND PRELIMINARIES

1, *Location of Site.* Describe, including distance from nearest railway station with appropriate facilities. 2, *Access to Site.* Detail and mention particularly any special restrictions or difficulties. 3, *Order of Work.* State any special requirements of building owner affecting sub-contractor's work and any other factors liable to interfere with continuity. 4-7, *Extracts from Principal Contract.* Give appropriate information. 8, *Dayworks.* State applicable rates and circumstances in which dayworks will be accepted. 9, *Fluctuations.* Give conditions applying. 10, *Unloading, etc.* State who is to unload and get in. 11, *Storage Space.* State any restrictions and who is to provide dry storage and/or lock-up facilities. 12, *Scaffolding, Plant and Hoisting.* State who is to provide these services. 13, *Materials to be provided free by Principal Contractor.* Namely: Water, sand, cement, etc., if appropriate. 14, *Lighting and Power.* State who is to provide. 15, *Casing up and Protection.* State who is responsible. 16, *Welfare.* State standard required and who is to provide. 17, *Licences and Permits.* Give as much information as possible about building licence, priority and permits for materials.

3. NOMINATED SUPPLIER FORM

Reference.....
To the Principal Contractor.
TENDER for.....at..... for .....
Architect.....
Quantity Surveyor.....
* Principal Contractor.....

** This tender is subject to confirmation after the appointment of the principal contractor.*

We undertake to supply and deliver to site the materials or goods described or referred to in the specification and/or bill of quantities in accordance with the general conditions and to the satisfaction of the architect for the sum of.....(£ : :).

Our tender is subject only to adjustment for any variations authorized by the architect and/or in accordance with the terms of the fluctuations clause of the general conditions.
We agree to make good, free of charge, any defects appearing within the guarantee period due to defective workmanship or materials in the goods supplied by us and to bear any costs incurred by the principal contractor in connection therewith.

We undertake to commence delivery at such time as the principal contractor may require but not less than.....weeks from the date of the official order and to complete delivery within.....weeks from the date of commencement.
We agree that this tender shall be open for acceptance within.....weeks from the date given below.
For and on behalf of.....
Address .....
Signature .....
Date .....
To be returned to.....

GENERAL CONDITIONS FOR SUPPLIERS

1. Location of Site.....
2. Access to Site.....
3. Order of Delivery.....
4. Guarantee Period.....
5. Terms of Payment and Discount.....
6. Fluctuations .....
7. Returnable Packings .....
8. Licences and Permits.....

4. NOTES FOR GUIDANCE IN USE OF NOMINATED SUPPLIERS' FORM

All items listed below are to be completed by the firm sending out the enquiry. Specification and/or bill of quantities to be attached to the form of tender together with any necessary drawings.

TENDER

Reference. For contract number or similar reference. *Tender for* . . . Description of materials or goods. *at* . . . Name of contract. *for* . . . Name of building owner. *Architect.* Fill in name and address. *Quantity Surveyor.* Fill in name and address. *Principal Contractor.* If principal contractor is known fill in name and address and delete note under. If principal contractor is not known state 'Not Known' and preserve note under. *To be returned to* . . . Architect, quantity surveyor or principal contractor.

GENERAL CONDITIONS

1, *Location of Site.* Describe, including distance from nearest railway station with appropriate facilities. 2, *Access to Site.* Detail and mention particularly any special restrictions or difficulties. 3, *Order of Delivery.* State any special requirements of building owner and any other factors which will affect the supplier's delivery. 4. *Guarantee Period.* State time (bearing in mind the defects liability period of the principal contract). 5, *Terms of Payment and Discount.* Give appropriate information. 6, *Fluctuations.* Give conditions applying. 7, *Returnable Packings.* State whether or not principal contractor will return these carriage paid. 8, *Licences and Permits.* Give as much information as possible about building licence, priority and permits for materials.

Obituaries

Ebenezer James MacRae [*F*], late Edinburgh City Architect, died on 15 January 1951, a few days before his seventieth birthday.

Mr. MacRae was educated at George Watson's Boys' College, Edinburgh, studied architecture at Edinburgh College of Art, and was apprenticed to J. Macpherson of Edinburgh. In 1908 he entered the service of the Corporation of Edinburgh on the staff of the Superintendent of Works. In 1925 he became City Architect, and continued in that office for more than twenty years. His architectural works during that period included the Portobello Power Station, the City Chambers extension, the Heriot Watt College extension, the Nurses' Home at Bangour Hospital, and a number of schools, public baths, fire stations, police buildings, etc.

Mr. MacRae was much interested in the preservation of Old Edinburgh, and after his retirement published two Reports on the subject, 'The Heritage of Greater Edinburgh' and 'Report on the Royal Mile, Edinburgh'.

Mr. Esmé Gordon, a friend, writes:

'It is probably customary for the loss of an architect to be recorded in the pages of a professional journal by a contemporary who shared intimately in the life and work that has terminated. But it is also fitting in this instance that a younger generation with no claims to these qualifications should be found paying tribute. For "E.J." was in no way a man bound to his years or times—in our part of the world he was the friend of all, regardless of age.

'What manner of man was this son of the Manse? E. J. MacRae was essentially Scottish, with a graciousness now so rare; in appearance tall with a characterful, kindly face that lit up with a most gentle and genial smile of welcome to all of any age, position or class; a face that had engraved on it a complete honesty of purpose. The merry twinkle of a keen sense of humour that was always strictly governed by a sense of propriety and was never active at the expense of a fellow being was never far from his eyes. He understood and was deeply loved by children.

'My generation is familiar with much of his work as City Architect in Edinburgh. We know sufficient to evaluate the quality of his work, which indeed speaks for itself, but there are also the vast programmes carried out from his designs and under his very real and personal direction. We join in thanking him for the care and sympathy with which he not only cherished but strengthened the best roots of our traditions in his restoration work and maintenance of our monuments. What we also know well and regard with the utmost respect are his two reports on Old Edinburgh, which are models of their kind.

'He was dedicated to his work and delighted also in all aspects of Man's voyages into the realms of art. He showed a deep interest in the personalities and activities of each oncoming wave of students, being an unfailing visitor to every College of Art exhibition, and did not confine his attention to the work of the School of Architecture alone. He made a point of meeting and talking with the students, dearly loving the experimental, the daring or the unusual in their work. When he lectured to students one was conscious of no barrier, there was a bond of affinity despite the difference in age. For many years he was, and enjoyed being, the local external examiner in the Final Professional Practice examination, and who can assess the debt owed by countless candidates for his advice so tactfully given at the Oral?

'His heart was close to nature, and was at one with the world of birds. Wet or fine he sought his release and relaxation tending his cherished garden. Callers without number at his home, seeking help or advice, will have an indelible picture of this ready listener in his old green felt hat and muddied waterproof. To the end he remained a keen sketcher.

'He was a friend to the cripples, the orphans, the world's victims. Societies and Councils of interests too numerous to mention received generously of his precious time. He was not a club man; his club was humanity at large, his interests the world. He loved all men, loving us in part, I think, for our weaknesses.

'Such a man was E. J. MacRae. We mourn the passing of a true and irreplaceable friend, a Christian gentleman who will not be forgotten by those who knew him.'

Sir James West, O.B.E. [*Retd. F*], died on 15 June last, aged 67 years. Sir James had spent his entire working life in the Ministry (formerly Office) of Works. At the time of his retirement in 1945 he held the offices not only of Chief Architect, but also Director of Post-War Planning. Sir Charles Mole, M.V.O., O.B.E. [*F*], Director-General of Works at the Ministry, writes the following appreciation:

'James Grey West was born in Cardiff in 1885. He was educated and articled in that city, and during his articles he won a prize for the best measured drawing of the Gateway to Beaupré Castle. He then went on a tour of France and Belgium, making many pencil sketches of architectural works. He joined the Office of Works in 1904 as a Temporary Draughtsman, was successful in a Civil Service examination and became established as an Assistant Architect in 1911.

'Through successive promotions to Architect and Senior Architect he became, on the retirement of Sir Richard Allison, Chief Architect of the Office of Works in 1934. He was made an O.B.E. in 1930 and was knighted in 1936.

'Apart from his administrative duties, Sir James West was personally responsible for the design and execution of a number of works of public interest and of widely varying character. Among these were the Ministry of Pensions' offices at Acton—a steel and concrete multi-storied building erected in 1921; the Royal Courts of Justice at Belfast—a stone building of monumental character; works of a more intimate character, such as the tea-house in St. James's Park and the main entrance gates to Queen Mary's Garden in Regent's Park; the Royal Air Force College, Cranwell, and the Annexe to Westminster Abbey for the Coronation of King George VI and Queen Elizabeth.

'Shortly after the outbreak of the war of 1939-45 the Office of Works had become the Ministry of Works and Sir James West was detached from the executive work of the Ministry, and while retaining his title of Chief Architect he became the Director of Post-War Planning. Under his direction Study Groups on which the building professions were represented were set up to consider and make recommendations for post-war building practice. These issued in the publication of the numerous well-known Post-War Building Studies. The work of this period was done under great difficulty owing to the consequences of a serious illness suffered in the early part of the war, and into it, notwithstanding his physical weakness, he threw an untiring enthusiasm, remarkable in one of poor health.

'He retired from the public service in 1945 and lived quietly in Esher, and for the last two or three years of his life at Beer in South Devon, where he was able to exercise with the same enthusiasm which he had given to his official work his interests in photography, astronomy and microscopy, including systematic photography over a period of sun spots. Some of his photographic work was published and also exhibited at the Sidmouth Camera Club. He also gave lectures to local societies on architectural features in South Devon. He showed great skill in improvising his own instruments both in metal and wood.

'By training and inclination he was a traditionalist and his work showed his liking for orthodox detail, born of years of careful and meticulous study of the best examples of past and contemporary architecture. Nevertheless he was broadminded in his outlook, ready to accept and encourage changes in design occasioned by the development of functional requirements. He set a high standard for the work of the Department, which he controlled architecturally, but was ever ready to foster the individuality of the architects who worked under him. No more fitting tribute could be paid by the Institute than that in the later years of his activities as Chief Architect an exhibition of outstanding examples of the architectural work of his Department was held within its walls.'

W. Oscar Langbein [*L*] died on 26 March, aged 81, after very many years of practice, mainly in London.

Mr. Langbein held the two appointments of Architect to the Roman Catholic Church and Architect to a London firm of brewers. Among the works he carried out in his former capacity were churches at Newhaven, Sussex, at Gillingham, Kent, and in Cornwall Road, London; Roman Catholic schools at Norwood, Dartford and Ashford; a vicarage and church at Lavender Hill, and the vicarage and church of St. Barnabas, Clapham Common; and St. Joseph's Convent, Mill Hill. In his other capacity he built more than fifty hotels and public houses, including the Fleece Hotel, Colchester, the Hope at Tollesbury, both in Essex; Morton's Hotel and the King's Head, West Street, Brighton; the Telegraph Hotel at Brixton, and the King's Head at Tooting.

A particularly interesting piece of work was his alteration about 1900 of the old Alhambra Variety Theatre in Charing Cross Road. The only entrance at the time was in Leicester Square, and Mr. Langbein provided a new façade and entrance in Charing Cross Road.

Murray Jacob Harris [*Retd. F*], Mayor of Johannesburg 1923-24, died in Johannesburg on 15 October 1950 at the age of 75.

Mr. Harris, a Rand pioneer, was closely identified with the growth of Johannesburg, and was well known for devoted work in many spheres, including municipal affairs, education and social welfare. Born in London, he went to Johannesburg to practise as an architect in 1893. From 1906 to 1912 he was examiner in Architectural Practice at the Transvaal University College, and in 1918 he became President of the Transvaal Institute of Architects. Mr. Harris was councillor for the Doornfontein-Judiths Paarl ward, and as a member of the Public Library Administration 1914-24 was largely responsible for making Johannesburg's present library a free municipal institution in 1924. From 1924 to 1932 he was chairman of the governing body of Athlone High School, and was also for some time a member of the Witwatersrand University Committee. He founded the Johannesburg Jewish Guild, and was its president for many years.

Mr. Harris was largely responsible for the drafting of the Architects and Quantity Surveyors (Private) Act, 1927, and was one of the delegates chosen to present the Act before Parliament.

Notes and Notices

NOTICES

Session 1950-51. Minutes XI

At the Ninth General Meeting of the Session 1950-51 held on Tuesday 19 June 1951 at 6 p.m., Mr. John L. Denman, F.S.A., J.P., Vice-President, in the Chair.

The meeting was attended by about 295 members and guests.

The Minutes of the Special General Meeting held on Tuesday 3 April 1951 and of the One Hundred and Thirteenth Annual General Meeting held on Tuesday 1 May 1951 having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the Chairman:

AS FELLOWS:

G. B. Colbourn, G. B. Drury, Felix Holt, Harold Overnell, W. A. Sherrington, Stanley Ripley, K. L. Sharpe, George Stewart, Charles Sykes, C. A. Waller, Felix Walter, C. W. Wilkins.

AS ASSOCIATES:

P. G. Plumridge, Harold Bailey, Miss J. M. Baird, K. F. Baker, Miss V. E. Baker, A. F. Bennett, Douglas Bernhardt, P. J. Booth, W. G. Bor, F. R. Bottle, Norman Brown, F. A. Buttress, G. A. Carter, B. C. Chessum, Richard Clark, F. S. Clater, B. G. Cobb, D. A. Cobb, J. E. Collins, Anthony Cook, Keith Cooper, J. W. Courtenay, Miss V. M. Currie, P. J. Darch, Oscar Davies, H. C. Dollery, L. F. J. Downs, P. P. Drew, Mrs. E. I. Fara, Martin Field, J. D. Forbes-Nixon, L. T. Foster, Miss J. P. Furney, P. M. Gardner, R. D. Gay, A. A. Geeraerts, A. E. Good, J. L. Heap, J. C. Howlett, M. J. Huckstep, W. A. Humphreys, John Johnson, H. R. E. Knight, H. J. Lane-Davies, D. G. Luckes, Isidore Markham, G. A. J. Mathers, Roy Middleton, D. A. Muller, Miss P. A. Nottingham, Miss M. E. O. Oldrey, R. J. Ovenden, J. F. Porteous, R. C. Rainger, Jerrold Rostron, Thomas Rutherford, B. J. Saunders, T. B. H. Schonberg, A. R. Scott, Anthony Selman, P. H. A. Shields, F. P. Softley, J. M. Spence, D. A. Stow, J. J. Sturgeon, J. M. Sweet, L. I. M. Thomas, H. L. Thorne, Ronald Thurston, E. H. Tietjen, W. H. Tritton, R. D. Utting, D. C. W. Vane, P. W. White-Gaze, D. O. Williams, R. A. Wilson.

AS LICENTIATES:

D. M. Clough, James Johnston, the Rev. Canon E. P. Laycock.

The Secretary having read the report of the scrutineers on the result of the Annual Election for the Council, the Chairman declared that the members of the Council and the Honorary Auditors for the Session 1951-52 were duly elected in accordance therewith.

On the motion of the Chairman, a vote of thanks was passed by acclamation to the scrutineers for their labours, and was briefly responded to by Mr. E. G. Allen [*F*], Chairman of the scrutineers.

Mr. R. Furneaux Jordan [*F*] having read a Paper on 'The Architectural Significance of 1851', a discussion ensued, and on the motion of Mr. Hugh M. Casson, M.A.(Cantab.) [*F*], seconded by Mr. Anthony M. Chitty, M.A. (Cantab.), A.M.T.P.I. [*F*], a vote of thanks was passed to Mr. Jordan by acclamation and was briefly responded to.

The proceedings closed at 7.45 p.m.

Cessation of Membership

Under the provisions of Bye-law 21 the following have ceased to be members of the Royal Institute:

As Fellow: Tha Tun.

As Associate: Roy Thomson Christy.

Disciplinary Action

The membership of Mr. John Swarbrick of 34 Gt. Ormond Street, London, W.C.1, has, by degree of the Council made pursuant to the Bye-laws, been suspended for a period of six months from 19 June 1951; and accordingly he ceases during that period to be a member of the Royal Institute.

COMPETITIONS

City of London (Golden Lane) Housing Scheme

The Corporation of London invites architects to submit designs in competition for a new housing scheme in Golden Lane, E.C.

Assessor: Mr. Donald H. McMorran [*F*].

Premiums: 1,000 gns., 700 gns., 500 gns., 300 gns.

Last day for submitting designs: 31 January 1952.

Last day for questions: 31 August 1951.

Conditions may be obtained on application to the Town Clerk, Corporation of London, 55-61 Moorgate, E.C.2.

Deposit 2 gns.

Technical College, Poole

The Dorset County Council invite architects to submit designs in competition for a College of Further Education at Poole, Dorset.

Assessors: Mr. Julian Leathart [*F*] (nominated by the R.I.B.A.), Mr. S. A. W. Johnson-Marshall, B.Arch. [*A*] (Chief Architect, Ministry of Education), Mr. H. E. Matthews, [*F*] (County Architect, Dorset), Mr. J. Haynes, M.A. (County Education Officer, Dorset), Mr. H. J. Shelley, O.B.E. (Chief Inspector, Ministry of Education).

Premiums: £1,000, £500, £300.

Last day for submitting designs: 1 October 1951.

Conditions may be obtained on application to the County Education Officer, County Hall, Dorchester, Dorset.

Deposit £1 1*s*. made payable to the County Treasurer.

BOARD OF ARCHITECTURAL EDUCATION

The Ashpitel Prize 1950

The Ashpitel Prize, which is a prize of books to the value of £20 awarded to the candidate who, taking the Final Examination to qualify as an Associate, most highly distinguishes himself among the candidates in the Final Examinations of the year, has been awarded to Mr. David William Hubert [*A*] (The School of Architecture, The Polytechnic, Regent Street, London).

Building Surveying Examination

The R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on 3, 4 and 5 October 1951. Applications for admission to the examination must be made not later than 17 August on the prescribed form to be obtained from the Secretary, R.I.B.A.

ALLIED SOCIETIES

Changes of Officers and Addresses

Royal Incorporation of Architects in Scotland. President, Lieut-Col. Alexander Cullen, O.B.E., T.D., F.R.I.A.S., F.R.I.C.S., F.R.S.E., M.T.P.I. [*F*], The Castle, Inverness. Past President, Lockhart W. Hutson, O.B.E., F.R.I.A.S. [*F*], 119 Cadzow Street, Hamilton. Vice-Presidents: *Aberdeen*, Leo Durnin, Dip. Arch. [*A*], 252 Union Street, Aberdeen; *Dundee*, A. C. Barrie [*L*], 104 Commercial Street, Dundee; *Edinburgh*, W. H. Kininmonth [*F*], 16 Rutland Square, Edinburgh; *Glasgow*, E. G. Wylie, C.B.E., M.C. [*F*], 120 Blythswood Square, Glasgow; *Inverness*, R. Carruthers-Ballantyne [*F*], 41a High Street, Inverness; *Stirling*, L. C. Blakey, F.R.I.A.S., 28 Queensgate, Inverness.

The Wessex Federal Society of Architects. The address of the Hon. Secretary, Kenneth Nealon [*A*], is now 28 Orchard Street, Bristol 1. Mr. Nealon's telephone number remains unaltered.

The Essex, Cambridge and Herts Society of Architects. Cambridge Chapter: Hon. Sec., W. Lambert Lee [*A*], 7 Church Lane, Madingley, Cambs. *Chelmsford Chapter:* Chairman, D. Senior [*F*], Byngland, Rainsford Avenue, Chelmsford. *Colchester Chapter:* Chairman, P. Russell Walker, T.D. [*F*], 7 Victoria Street, S.W.1. *West Essex Chapter:* Hon. Sec., S. John Clapp, Rose Farm, Traps Hill, Loughton, Essex.

Coventry Society of Architects. Chairman, Duncan Kaye [*A*], 25a Kenilworth Road, Leamington Spa.

Leicestershire and Rutland Society of Architects. President, Anthony E. Herbert [*A*], 18 Friar Lane, Leicester.

Gloucestershire Architectural Association. President, R. W. Paterson [*A*].

Northants, Beds and Hunts Association of Architects: Annual General Meeting

The Annual General Meeting of the Association was held on 8 June. The winning and other selected drawings by competitors in the Association's Annual Competitions were exhibited in Shire Hall, Bedford, for the inspection of those who attended the meeting. The President gave a report on the Assessors' adjudications and then presented the winners with their awards.

The President drew the attention of the meeting to arrangements now being made by the Northamptonshire Branch to hold an Exhibition in the County Hall, George Row, Northampton, from 4 to 18 August to mark the Festival Year and to bring the work of the architect to the notice of the public.

GENERAL NOTES

Second Congress of the International Union of Architects: Rabat, Morocco—23-29 September 1951

Messrs. Thos. Cook and Son, Official Travel Agents to the Congress, have given the following particulars of travel arrangements which have been organized for members attending from Great Britain:

(1) *TRAVEL BY SURFACE ROUTE.* Leaving London at 10.30 a.m. on 17 September via Dover, Calais, Paris, arriving Marseilles a.m. 18 September and embarking on Paquet Line steamer for Casablanca, arriving evening 21 September; continue to Rabat, arriving same evening. Stay at Rabat during Congress and return 30 September by the same route as outwards, arriving in London 4 October.

Fare: £77 13s. per person (subject to a minimum of 10 persons travelling together). The

above fare includes second class travel tickets (first class on Channel steamer); meals en route; reserved seats on trains; minimum rate second class berth on Mediterranean steamer; full board accommodation—two-bedded room—at a superior second class hotel at Rabat, including tips and taxes.

Optional supplements, such as first class travel throughout or on the Mediterranean steamers, first class hotel accommodation, single rooms, sleeping-car accommodation between Paris and Marseilles and *Golden Arrow* Pullman accommodation between London and Paris can be arranged.

(2) *TRAVEL BY AIR.* Leave London in the afternoon of 20 September by Air France plane to Casablanca and continue by road to Rabat, arriving early in the morning 21 September. Stay at Rabat during Congress, returning by Air France plane from Casablanca in the evening 30 September, arriving in London mid-day 1 October.

Fare: £83 18s. per person. The above fare includes air travel out and home; transfer from Casablanca to Rabat in each direction; full board accommodation—two-bedded room at a first class hotel in Rabat, including tips and taxes.

In addition, various post-Congress tours through Morocco of from three to 10 days have been arranged, coaches leaving Rabat on 30 September and returning to Casablanca. Prices for these tours range between £12 10s. and £67. Those wishing to take part in the post-Congress tours should indicate their intentions as early as possible.

The registration charge of French francs, 3,500 (wives and friends: francs 2,500) can be paid through Thomas Cook's, who can also supply the necessary currency application forms for the special allowance of £30 allowed to official delegates and also for the usual basic travel allowance.

All the fares quoted above are subject to alteration without notice.

All enquiries should be addressed to Thos. Cook and Son Ltd., Post Order Department (Ref. POD/N), Berkeley Street, London, W.1.

Anglo-Brazilian Society Essay Prize

Entries for the prize of £50 for an essay on Brazilian Architecture recently offered by the Anglo-Brazilian Society have now been considered by the Jury, who have decided that none of the essays received reached the standard required by the conditions, and that it is therefore not possible on this occasion to award the prize. The sum of five guineas will, however, be sent to each of the competitors to cover their expenses in the matter.

It is hoped that the prize will be re-offered.

York Summer School 1951

Details of the York Summer School of Architecture were given in the April JOURNAL (p. 214). Since these details were published it has been decided, owing to the great success of the York Festival of Music, Drama and Architecture, to extend the facilities and to make more places available. Applications can be entertained up to the end of July.

Yorkshire Architectural Scholarships

Applications are invited from students of architecture of either sex, born in Yorkshire of at least one Yorkshire parent, for scholarships given under the will of the late William Hoffman Wood to defray the cost of architectural training at home and abroad. Applicants must be under 21 and should send particulars of age, place of birth of self and parents, education, attainments and present occupation to W. H. Clarke and Co., Solicitors, 12 South Parade, Leeds, 1, by 31 July.

Under the same will the 'Leeds Medal' is awarded to the artist, born of parents born in Yorkshire within 60 miles of Leeds Town Hall, completing the best painting, sculptural or architectural work during the year for which the medal is awarded. The Trustees are now considering the award of the medal for 1950.

More A.B.S. Centenary Donations

G. C. Barker, £1 1*s.*; H. G. Baker, 10*s.* 6*d.*; Sir Robert McAlpine and Sons, Ltd., £105; J. S. Foster, £1 1*s.*; J. H. Webb, £1; V. H. Wakefield, £2 2*s.*; the Staff of Tooley and Foster, £6 3*s.* 9*d.*; H. D. Hartley, 10*s.* 6*d.*; Aslan and Freeman, £5 5*s.*; H. L. Curtis, 17*s.*; Mrs. F. Woodward, 10*s.*; H. L. Geeson, £2; Essex, Cambridge and Herts. Society of Architects, £150; Kingston-on-Thames Chapter, South-Eastern Society of Architects, £10 Wallis, Gilbert and Partners, £52 10*s.*

The total received up to 29 June was £7,695 7*s.* 7*d.*

R.I.B.A. Golfing Society

The annual match with the L.M.B.A. Golfing Society at West Hill on 12 June resulted in a win for the Architects by 13½ to 11½.

The R.I.B.A.G.S. was represented by: Sir Giles Scott, O.M., R.A. [*F*], H. St. John Harrison [*F*], Richard Scott [*A*], G. Felix Wilson [*L*], E. H. Firmin [*A*], W. L. Twigg [*F*], S. H. Statham [*A*], A. V. Farrier [*A*], John Grey [*F*], F. Sutcliffe [*F*], W. R. F. Fisher [*F*], C. Tucker [*S*], F. T. Smith [*L*], W. D. White [*A*], J. Emberton [*F*], A. H. Watkins [*L*].

Notes from the Minutes of the Council

MEETING HELD 19 JUNE 1951

Appointments

R.I.B.A. Representative on Faculty of Architecture of University of Wales : Mr. Norman P. Thomas [*A*] in place of Mr. C. F. Bates [*F*].

R.I.B.A. Representative on Court of University of Sheffield : Mr. Robert Cawkwell [*F*], President, Sheffield, South Yorkshire and District Society of Architects and Surveyors, in place of Mr. H. B. S. Gibbs [*F*].

Town Planning Institute: Rees Jeffreys Triennial Lectures: R.I.B.A. Representative on Advisory Committee: Mr. H. T. Cadbury-Brown [*A*].

General Council for the National Registration of Plumbers: Annual Meeting, Torquay, 20 June 1951: R.I.B.A. Representative: Mr. J. Ardern Powell [*F*], President, Devon and Cornwall Architectural Society.

B.S.I. Committee SFE/14/5—Methods of Test for Heat Insulation: R.I.B.A. Representatives: Mr. E. S. Ambrose [*F*], Mr. George Fairweather [*F*] and Mr. D. E. Nightingale [*F*].

Birthday Honours: The congratulations of the Council were conveyed to the following members on whom His Majesty the King had conferred awards: *G.B.E.:* The Earl of Crawford and Balcarres [*Hon. F.*]. *K.C.B.:* Thomas Downing Kendrick [*Hon. A*]. *Knight Bachelor:* Gerald Barry [*Hon. A*]. *C.B.E.:* C. H. Aslin [*F*]; R. T. Kennedy [*A*]; Dr. Thomas Sharp [*L*]. *O.B.E.:* Robert Atkinson [*F*]; Mark Hartland Thomas [*F*]; Patrick Lawrence Hughes [*L*]. *M.B.E.:* F. M. Dean [*A*]; Miss Dorothy Elizabeth Soper [*A*].

British Architects' Conference 1951: A hearty vote of thanks was passed unanimously in favour of the President and Council of the Royal Society of Ulster Architects and all those who had assisted in the recent successful Conference in Belfast.

Public Relations in the Areas of Allied Societies: On the recommendation of the Public Relations Committee, the Council approved a proposal originated by the Allied Societies' Conference that a meeting should be devoted to the discussion of the place of public relations in the activities of Allied Societies. Arrangements are accordingly being made for a meeting to be held on the afternoon of Wednesday, 7 November, 1951 at the R.I.B.A. for this purpose.

(*Note:* The Allied Societies' Conference is to be held on 6 November, the Joint Meeting of the Conference and R.I.B.A. Council on the morning of 7 November.)

Value of Work which may be Tendered for without Quantities: The Council noted with satisfaction that the National Federation of Building Trades Employers have agreed to increase the limit in value of work which may be tendered for without quantities from £1,500 to £3,000. The Council also recalled that in the negotiations leading up to this decision the R.I.B.A. had undertaken on behalf of its members to co-operate in and support the revised rule and to deprecate strongly any attempt to evade the new limit.

The Building Owner and Planning in Advance: On the recommendation of the Joint Consultative Committee of Architects and Builders, the Council approved for publication a memorandum on the responsibilities of the building owner in regard to planning in advance.

Builders' Tenders. The Council considered the report of the Joint Consultative Committee of Architects and Builders on the submission of 'complimentary' tenders by builders who had no intention of competing for a contract. The problem of insufficient time being given by architects to builders to prepare priced bills was also considered. The Council approved the recommendation of the Joint Committee that members should be urged to send out preliminary enquiries to their selected builders at an early stage asking if they wished to tender for a particular contract. Members should also make it clear in so doing that if the builder declines for good and sufficient reasons it will not prejudice his chances in future.

On their part, the National Federation of Building Trades Employers have undertaken to discourage the practice of submitting 'complimentary' tenders.

Social Needs and Problems of Families Living in Large Blocks of Flats: The Council approved a memorandum of evidence prepared by the Town and Country Planning and Housing Committee for submission to the Sub-Committee of the Central Housing Advisory Committee, convened to study the social needs and problems of families living in large blocks of flats.

The Wessex Society of Architects. The Council approved a scheme for the re-organization of the Wessex Society of Architects and its three constituent Societies which involves the revision of the rules of each Society. The revised rules of each Society were formally approved and the Wilts and Dorset Society of Architects was admitted as an Allied Society under the provisions of Bye-law 70.

The titles of the Societies concerned will in future be: The Wessex Federal Society of Architects, The Bristol and Somerset Society of Architects, The Gloucestershire Architectural Association, The Wilts and Dorset Society of Architects.

Membership: The following members were elected: As Fellows, 13; as Associates, 149; as Licentiates, 11.

Students: 132 Probationers were elected as Students.

Applications for Election: Applications for election were approved as follows: *Election 9 October* 1951: as Fellows, 4; as Associates, 58. *Election 6 November* 1951 (*Overseas Candidates*): as Fellow, 1; as Associates, 7.

Applications for Reinstatement: The following applications were approved: as Associates, William Jean Theodore Godwin, Thomas Maldwyn Jones; as Licentiates, Francis Robert Aloysius Conway, James Hutchon.

Resignations: The following resignations were accepted with regret: Mrs. Rose Best [*A*], Mrs. Catherine Mary Helen Lambert [*A*], Mrs. Helen Dora Mischler [*A*], Mrs. Margaret Reid Rutherford [*A*], Ivan William Watkin [*A*], John Henry Daniels [*L*], Edward Stanley Mitton [*L*].

Applications for Transfer to Retired Members' Class under Bye-law 15: The following applications were approved: as Retired Fellows, Alfred Forrester, Herbert William Matthews; as Retired Licentiates, Herbert Sydney Candish, Thomas Victor Duncan, William Edward Renwell Randall.

Obituary: The Secretary reported with regret the death of the following members: Frederick William Charity [*F*], Stephen Stanislaus Kelly [*F*]. Mr. Kelly was a past President of the Royal Institute of the Architects of Ireland and had represented that body on the Allied Societies' Conference. Edmund Frederick Ronald Sample [*F*], Harold Tomlinson [*F*]. Mr. Tomlinson was a past member of the Board of Architectural Education and of the Schools Committee. Henry Alexander Radclyffe Ellis [*Retd. F*], James Baird [*A*], William Alexander Davidson [*A*], Reginald Eyre [*A*]. Mr. Eyre was Hon. Secretary of the Institute of Architects of Malaya. Edward Harding Payne [*A*], Cyril Edward Power [*A*], Mr. Power was Soane Medallist 1900. Alan Dudley Scott [*A*], Thomas Percy Bennett [*L*], A. St. John Diamant [*L*], Alec Euson [*L*], Leslie Charles Fairbairn [*L*], Charles Russell Hall [*L*], Ben Haylor [*L*], Thomas Hill [*L*], Charles Stuart Macnab [*L*], Herbert William Maguire [*L*], Charles Digby Planck [*L*], Ivor Kyle Redmond [*L*], Joshua James Simpson [*L*], Adrian Charles Stewart Wheeler [*L*], Richard George Whitley [*L*], Herbert Alfred Wright [*L*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Membership Lists

ELECTION: 19 JUNE 1951

The following candidates for membership were elected on 19 June 1951:

AS FELLOWS (13)

Beasley: Albert [*A* 1922].
Cuthbertson: Dale [*A* 1931], Singapore.
Folkes: John Homery [*A* 1930], Stourbridge.
Hall: George Albert Victor [*A* 1928], Hong Kong.
Harris: John Seymour [*A* 1941], Birmingham.
Hawkins: George Heslop, T.D. [*A* 1938], Sunderland.
Knight: Professor Cyril Roy, M.A., B.Arch. (Liverpool) [*A* 1924], Auckland.
Lone: Reginald Wilcox [*A* 1918].
Neil: Charles Warren [*A* 1930], Lincoln.
Stevens: Kenneth Arthur [*A* 1937], Oxford.
Stout: George Russell [*A* 1937], Lagos.
Thorp: Charles Richard, A.M.T.P.I. [*A* 1939], York.

And the following Licentiate, who is qualified under Section IV, Clause 4 (*c*) (ii), of the Supplemental Charter of 1925:

Fish: Frederick James, Liverpool.

AS ASSOCIATES (148)

Allen: Geoffrey Jack.
Ames: Gerald George Singleton, Liverpool.
Amos: Francis John Clarke, Dip.Arch. (The Polytechnic).
Atkinson: Marjorie Joan (Miss), Dip.Arch. (The Polytechnic).
Aylmer: Alexander Louis, Glasgow.
Bell: Thomas Geoffrey, New Barnet.
Berryman: Arthur Harold, Belfast.
Bertinshaw: James Welbourne, Wellington, N.Z.
Bidwell: Trena Mavis (Miss), Dip.Arch. (The Polytechnic), Buckhurst Hill.
Bitcheno: Leonard Charles, Dip.Arch. (The Polytechnic), Beaconsfield.
Black: Angus Ross, Dunedin, N.Z.
Bloomfield: Ralph l'Anson, Ashfield, N.S.W.
Borley: Stanley Eric, Seaford.
Bramley: John Greenwood, Preston.
Bridges: Peter Sydney Godfrey.
Brownlow: James Gordon, Narrabri, Australia.
Burberry: Peter John, Dip.Arch. (The Polytechnic).
Burns: Brian John, Dip.Arch. (The Polytechnic), Ilford.
Campbell: John Douglas, Darwin, Australia.
Carter: Thomas Walter Oliver, Dip.Arch. (The Polytechnic).
Chatwin: Alfred, D.A. (Dundee), Arbroath.
Chesher: Robert Stuart, Dip.Arch. (The Polytechnic), Leigh-on-Sea.
Cobbett: Martin Lewis.
Connidis: Andrew Joseph, Dip.Arch. (The Polytechnic).
Cooke: Douglas, Leicester.
Cooper: Charles Edmund, Matlock.
Cooper: John Walter, Dip.Arch. (The Polytechnic), Bromley.
Cottell: Charles Lewis, Swindon.
Cruickshank: George.
Cummings: Easton Alexander, Glasgow.
de Chenu: Roger Noel, B.Arch. (Dublin), Dublin.
Dimond: James Francis, Plymouth.
Dixon: Philip Arthur, Dip.Arch. (The Polytechnic), Pitsea.
Earle: James Heward, Glen Iris, Australia.
Emerson: John Brian, Belfast.
Enevoldson: Leslie Ivor, Dorchester.
Feeney: Martin Gerard, Dublin.
Fenton: Thomas Bruce, Stoke-on-Trent.
Firth: Cedric Harold.
Francis: Leslie William.
Fuller: James Samuel William, A.R.I.C.S.
Furness: Geoffrey Gordon, Huddersfield.
Garrett: Stephen George, M.A. (Cantab).
Goodrich: Alan Russell.
Graff: Elias, B.Arch. (Rand), Johannesburg.
Gray: Reginald Sanger, Dip.Arch. (Dunelm), Newcastle-upon-Tyne.
Greaves: Ronald Alfred, Ilford.
Gummer: John Batley, Auckland.
Gundry: Peter Bertram Horace.
Hands: Dennis Clifford, Cheltenham.
Harrison: Roger Charles.
Head: Alfred Ernest.
Herrmann: Erich.
Higgison: Frank Robert Stephen, Burnham-on-Sea.
Hignell: Robert Stephen, Bristol.
Hill: John.
Hobbs: Arthur Frank, Wye, Kent.
Hobbs: Geoffrey Mansell, Esher.
Holwell: Alan.
Hopkins: Colin Reginald, Dip.Arch. (The Polytechnic).
Hothersall: George Leo.
Hughes: Merle Lake, Norwich.
Hughes-Jones: Morris, Bath.
Hunt: David, Dip.Arch. (The Polytechnic), Kingston.
Hutchings: Lois Margaret (Miss).
Inglis: Peter Charles Patrick.
Jackson: Antony Peter, Dip.Arch. (The Polytechnic).
Jepson: Frank Clifford, M.A. (Cantab).
Johnson: Elizabeth Marjorie (Miss), Dipl.Arch. (L'pool), Worcester Park.
Johnston: William Alfred, M.C., Dip.Arch. (Abdn.), Collieston.
Juster: Robert John, Dip.Arch. (The Polytechnic).
Kaye: Ian Stewart, M.A. (Cantab).
Kenchington: Brian Edward, Dip.Arch. (The Polytechnic), Rickmansworth.
Kent: Stanley George.
Kershaw: Albert, Leeds.
Labesse: Jeanne Paulette Marguerite (Miss), Dipl.Arch. (U.C.L.), Paris.
Lachlan: John Francis, Dip.Arch. (The Polytechnic).
Laity: Anthony Fox, Falmouth.
Lambert: Jack Lawrence, Lindi, Tanganyika.
Laurenson: Graeme, Taranaki, N.Z.
Leathart: John Anthony, B.A. (Cantab), Bagshot.
Leith: Charles Raymond, Downpatrick.
Locke: Peter Edwin.
Lorraine: Hans John, Oakleigh South, Australia.
McAllum: Ian Robert, Dunedin, N.Z.
McBride: John Alexander, M.B.E., Dip.Arch. (Sheffield).
MacDonald: Calum, Glasgow.
McDougall: John, Lower Mitcham, Australia.
McGuffie: David Kerr Paterson, D.A. (Glas.), Glasgow.
McMaster: Hughan James Michael, Dip.Arch. (The Polytechnic).
Madden: Kathleen Oonagh (Miss), B.Arch. (Dublin), Londonderry.
Moore: Colin Alfred, Bristol.
Myers: Edgar Leslie [*L*], Leeds.
Nash: Barbara Mary (Miss), Dip.Arch. (The Polytechnic).
Nicol: Douglas Wallace, Aberdeen.
Oates: Mary (Mrs.), Dip.Arch. (The Polytechnic).
O'Gorman: James Augustine, Dublin.
Orbach: Henry Siegbert.
Oser: Hans Peter, Sydney, Australia.
Outhwaite: Norman Hugh Gough, Dipl.Arch. (Leeds), Leeds.
Palmer: Maurice, Dip.Arch. (Nottm.), Grantham.
Peck: Malcolm Hopkins.
Perl: Marcus Aaron, B.Arch. (C.T.), Port Elizabeth.
Perry: Aubrey Alfred James.
Pierce: William Irvine, Enniskillen.
Pooley: Derek Harry, Canterbury.
Powell: John, Dip.Arch. (Leics.), Hinckley.
Preston: Alan Morley, Manchester.
Przybylski: Wojciech Kazimierz.
Rice: John Alfred Peters.
Richford: Paul, Dip.Arch. (The Polytechnic), Maidstone.
Ridgwell: Richard Anthony, Hornchurch.
Robbie: Roderick George, Dip.Arch. (The Polytechnic).
Roberts: Edward Thomas, Dip.Arch. (The Polytechnic).
Roberts: Joseph Bell, D.A. (Glas.), Glasgow.
Robertshaw: Joseph Arnold, Bradford.
Russell: Peter Stanley.
Scales: Lawrence Stanley Banham.
Seligmann: Claus Arthur.
Shaffrey: Philip Norbert, B.Arch. (Dublin), Bailieboro.

Shuldham: Dennis Leonard Gahan, Dip.Arch. (The Polytechnic).
Sidebotham: George William, Wolverhampton.
Smith: Ernest Fred, Leeds.
Smith: Pamela Gladys (Miss), D.A. (Edin.), Bristol.
Speak: Gerald, Dipl.Arch. (Leeds), Halifax.
Sprague: Ian B., Barwon Heads, Australia.
Srinivasan: Ramnarayan, Madras.
Standing: Stanley Owen, Toronto.
Stanley: Ronald, Dip.Arch. (Leics.), Leicester.
Swallow: Richard Dawson, Hull.
Tasker: Margaret Doreen (Miss), Dip.Arch. (Sheffield), Gloucester.
Taylforth: Jack Goddard.
Taylor: Gordon, Stonehaven.
Thomson: Janet (Miss), D.A. (Glas.), Glasgow.
Tonge: Deric Vernon.
Turner: Valerie Mary (Miss), Capel.
Vann: Joan Ellen (Miss), Dip.Arch. (Leics.), Rothley.
Vermeulen: Frederik Hendrik, B.Arch. (Rand), Johannesburg.
Wade: Herbert Randall, Dip.Arch. (The Polytechnic).
Warton-Woods: Huntley Alexander, Dip.Arch. (The Polytechnic), Farnborough, Kent.
Watson: Peter Derek.
Wedding: Adrian Philip, Auckland, N.Z.
Welch: John David, Portsmouth.
Williams: Edward John James, Burton-on-Trent.
Wilmshurst: William Edward, New Malden.
Wong: Ting-Tsai, B.Sc. (Hong Kong), Hong Kong.
Wright: David Charles, Rochester.
Wright: Richard Harold.

AS LICENTIATES (11)

Auty: Donald Simpson, Elgin.
Binks: Cyril, Leeds.
Fellows: Benjamin Herbert, Dar-es-Salaam, Tanganyika.
Hooper: Ashford Wilfred Graham, Portsmouth.
Jackson: John Alan.
Jacobson: Zalik, Clacton-on-Sea.
Lees: Cedric Ronald Lea, Launceston.
Pargiter: Leonard George, M.B.E.
Riley: Harold, Huddersfield.
Sanders: Henry Partridge.
Shennan: William Millward, Liverpool.

ELECTION: 3 JULY 1951

The following candidate for membership was elected on 3 July 1951.
Parnell: Alan Charles, Dip.Arch. (The Polytechnic).

ELECTION: 9 OCTOBER 1951

An election of candidates for membership will take place on 9 October 1951. The names and addresses of the candidates with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday, 30 July 1951.

The names following the applicant's address are those of his proposers.

AS FELLOWS (11)

Ford: George [*A* 1930], Chief Architects Division, Ministry of Works, S.W.1; Birch Lawn, Mountview Road, Claygate, Surrey. W. A. Rutter, P. M. Andrew, A. G. Alexander.

Gooding: John Francis Rowland [*A* 1936], Messrs. Jackson and Edmonds, 65 New Street, Birmingham; 'The Merle', 111 Coleshill Road, Marston Green, Birmingham. Reginald Edmonds, Herbert Jackson, F. Potter.

Johnson: Victor Lloyd [*A* 1934], 2 Ryecroft Avenue, Whitton, Middlesex. E. B. Musman, L. S. Stanley, M. H. Thomas.

Lloyd: Kenneth Alfred [*A* 1938], Messrs. Jackson and Edmonds, 65 New Street, Birmingham; 'Rozel', Belvedere Gardens, Tettenhall, Staffs. Reginald Edmonds, Herbert Jackson, F. Potter.

Miller: George Alan Gerard, A.M.T.P.I. [*A* 1939], Messrs. Jackson and Edmonds, 65 New Street, Birmingham; 'Leafyshade', 98 Mill Lane, Wednesfield, Staffs. Reginald Edmonds, Herbert Jackson, F. Potter.

Robinson: Herbert Fitzroy, B.A. (Arch.) (Lond.) [*A* 1936], 3 Verulam Buildings, Gray's Inn, W.C.1; 'Nine' The Green, Barrowfield, Hove, 4. Sussex. Prof. H. O. Corfiato, T.A. Lodge, H. Lidbetter.

Secrett: Michael John Frederick [*A* 1946], 42 Cornhill, E.C.3; 109 The Grove, Ealing, W.5. C. W. Box, Richard Henniker, E. D. J. Mathews.

Wakelin: Richard Newton [*A* 1930], Messrs. Campbell Jones and Sons, Skinners Hall, 9 Dowgate Hill, E.C.4; 35 Queens Court, Richmond, Surrey. M. Campbell-Jones, Prof. Basil Ward, W. G. Allen.

and the following Licentiates who are qualified under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925:

Anns: Kenneth, M.C., 1 Lincoln's Inn Fields, W.C.2; 22 Taymount Grange, Forest Hill, S.E.23. E. S. Barr, E. C. Leach, M. de. Metz.

Herring: George Howard, 21 Milton Road, Harpenden, Herts. Major B. C. Deacon, A. G. Shoosmith, H. J. Davies.

Slater: Thomas, 3 Stanley Street, Liverpool; 3 Ravenscroft Road, Birkenhead. Rupert Metcalf, A. E. Shennan, W. G. Dobie.

AS ASSOCIATES (69)

The name of a school, or schools after a candidate's name indicates the passing of a recognized course.

Abramson: Sam (Passed a qualifying Exam. approved by the I.S.A.A.)., 153 Sussex Gardens, W.2. Prof. William Holford, D. R. Harper and applying for nomination by the Council under Bye-law 3 (*d*).

Austin: Thomas John [Final], 14 Braynesmead Road, Cuckfield, Sussex. K. E. Black, B. W. L. Gallannaugh, W. L. Clarke.

Beese: Ivor Wyndham (Sch. of Tech. Art and Commerce, Oxford; Sch. of Arch.), 25a Davenant Road, Oxford. R. F. Dodd, David Beecher, David Booth.

Beevis: James Herbert [Special Final], Buckhurst, Sturt Green, Holyport, Nr. Maidenhead, Berks. John Greaves, Edgar Ranger, Guy North.

Broadhurst: Kenneth (Passed a qualifying Exam. approved by the R.A.I.A.), 4a Lownds Avenue, Bromley, Kent. L. K. Hett, E. B. O'Rorke, R. E. Enthoven.

Bucholc: Zdzislaw Stanislaw [Final], 12 Thurloe Square, Kensington, S.W.7. Brigadier Gerald Shenstone, W. B. Stedman, Thomas Ritchie.

Carmichael: John [Special Final], 102 Mill Road, Motherwell, Lanarkshire, Scotland. J. A. Coia, Prof. W. J. Smith, John Steel.

Chamberlain: Patrick Edward, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 31c Amersham Hill, High Wycombe, Bucks. J. S. Walkden, David Jenkin, W. W. Fisk.

Clare: Richard Henry (Arch. Assoc. (London); Sch. of Arch.), 26 The Ridgeway, Stanmore, Middlesex. Henry Elder, H. C. Powell, H. A. Metayers.

Clarke: William Adin, Dip.Arch. (Nottm.) (Nottingham Sch. of Arch.), 5 Titchfield Street, Mansfield, Notts. C. E. Culpin, David Booth, P. V. Burnett.

Connell: Gordon Geoffrey (Northern Poly. (London) Dept. of Arch.), 75 Woodhall Road, Chelmsford, Essex. T. E. Scott, S. F. Burley, Gordon O'Neill.

Curry: William Everard [Final], 664, Spring Bank West, Hull. J. Konrad, Edgar Farrar, G. D. Harbron.

Dubash, Homi Rustomji [Final], 4 Compton Terrace, N.1. C. M. Master, S. H. Parelkar, H. N. Dallas.

Ellis: Keith Harry Newton [Final], 32 Thorpe-Lea Road, Peterborough, Northants. A. W. Ruddle, J. G. Warwick, A. W. Wilson.

Entwisle: Norman [Final], 'Braemar', 212 Bradford Road, Farnworth, Nr. Bolton, Lancs. P. G. Fairhurst, B. L. Moir, H. T. Seward.

Fenner: Walter Leslie, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London; Sch. of Arch.), 3 Chudleigh Road, Brockley, S.E.4. J. S. Walkden, David Jenkin, George Coles.

Ferin: Harold Robert Stuart [Special Final], 58 Gresham Road, S.W.9. E. B. Webber, J. B. F. Cowper, Norman Keep.

Forrest: Peter William Charles, Dip.Arch (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 33 Brownlow Road, Peterborough, Northants. J. S. Walkden, David Jenkin, W. W. Fisk.

Furlong: Richard Albert (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 'Glendevon', 84 Heath Park Avenue, Cardiff. P. G. Budgen, Lewis John, C. F. Bates.

Graham: John Kenneth [Final], 48 Marlborough Park North, Belfast, N. Ireland. R. H. Gibson, A. F. Lucy, Frank McArdle.

Green: Donald, Dip.Arch. (Cardiff) (Welsh Sch. of Arch.; The Tech. Coll., Cardiff), c/o 37 Oxford Street, Barry, Glam. Lewis John, Harry Teather, C. F. Jones.

Haig: Iain Dewar, D.A. (Edin.) (Edinburgh Coll. of Art; Sch. of Arch.), 9 Carlton Street, Edinburgh. David Carr, J. F. Matthew, W. I. Thomson.

Halford: Frederick Samuel, M.C. [Final], 36 Wellington Walk, Henleaze, Bristol 9. G. D. G. Hake, T. H. B. Burrough, E. H. Button.

Hemingway: Peter George [Final], Elmhurst, Belgrave Road, Minster, Sheerness, Kent. A. W. Soden and the President and Hon. Secretary of the S.E.S.A. under Bye-law 3 (*a*).

Hickmore: Edward Stanley, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London; Sch. of Arch.), 11 Northbourne Road, Clapham Park, S.W.4. J. S. Walkden, W. W. Fisk, David Jenkin.

Hinton: Denys James (Arch. Assoc. (London); Sch. of Arch.), 25 Melina Court, Grove End Road, N.W.8. R. F. Jordan, Sydney Tatchell, Henry Elder.

Hobart: Frederick Arthur, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London; Sch. of Arch.), 115 Fortess Road, N.W.5. J. S. Walkden, David Jenkin, E. D. Mills.

Howarth: Stephen [Final], 8 Brixham Avenue, Low Fell, Gateshead 9, Co. Durham. J. H. Napper, W. W. Tasker, D. L. Couves.

Hunter: Gerald Oliver, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London; Sch. of Arch.), 53 Goldstone Villas, Hove 3, Sussex. J. S. Walkden, H. H. Ford, K. E. Black.

Hunter: Noel William (Arch. Assoc. (London): Sch. of Arch.), 5c, Parkhill Road, Hampstead, N.W.3. R. F. Jordan, O. P. Milne, Edric Neel.

Hyde: Dennis Arthur, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.). 20 Bawdale Road, East Dulwich, S.E.22. J. S. Walkden, W. W. Fisk, David Jenkin.

Irvine: Alan Montgomery, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 363 Russell Court, Woburn Place, W.C.1. J. S. Walkden, David Jenkin, Basil Spence.

Jacobs: Anthony David, Dip.Arch. (Leics.) (Leicester Coll. of Art and Tech.: Sch. of Arch.), 108 Holt Drive, Loughborough, Leics. Frank Chippindale, S. Penn Smith, H. G. Goddard.

Jolley: Frederick Charles Edward [Final], 43 The Grove, Kettering, Northants. H. R. Surridge, O. H. Nuttall, H. H. Clark.

Jones: Jill (Mrs.), Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 151 Shooter's Hill Road, Blackheath, S.E.3. J. S. Walkden, E. D. Mills, David Jenkin.

Jones: Richard Gemmill (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 12 Forbesfield Road, Aberdeen. G. A. Mitchell, E. F. Davies, A. G. R. Mackenzie.

Leach: Peter Edmond (Arch. Assoc. (London): Sch. of Arch.), 7 Holmesdale Road, Sevenoaks, Kent. Henry Elder, Victor Heal, C. J. Cable.

Line: Donald Frederick, B.Arch. (Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 46 Barrington Road, Crouch End, N.8. Prof. B. B. Lewis, Mrs. Hilary Lewis, A. R. Butler.

Linscott, Anthony Herbert Michael, Dip.Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 16 Rosehill Road, Burnley, Lancs. Prof. R. A. Cordingley, J. P. Nunn, Sam Taylor.

McCarthy, Robert Maxwell (Northern Poly. (London): Dept. of Arch.), 5 Bouverie Gardens, Kenton, Harrow, Middlesex. T. E. Scott and applying for nomination by the Council under Bye-law 3 (d).

Millar: Ruth Mary (Mrs.) [Final], 17 Cadogan Place, S.W.1. Prof. A. E. Richardson, D. du R. Aberdeen, S. Hyde.

Miller: Arthur John, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 96 Bedford Street South, Liverpool, 7. Prof. L. B. Budden, F. X. Velarde, Gordon Stephenson.

Mold: Edward John (Arch. Assoc. (London): Sch. of Arch.), 9 Thorncliffe Road, Norwood Green, Middlesex. Henry Elder, Edric Neel, H. E. Matthews.

Murwill: Ronald Joseph Patrick, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 43 Lyndhurst Gardens, Church End, Finchley, N.3. J. S. Walkden, David Jenkin, George Vey.

Nicoll: Alastair Reid (Dundee Coll. of Art: Sch. of Arch.), 66 Carnegie Place, Perth. John Needham, T. H. Thoms, L. W. Hutson.

Pache: Maurice Edwin [Final], 12 Beulah Road, Thornton Heath, Surrey. G. S. Harrison, Norman Keep, Harry Moncrieff.

Prabhawalkar: Anant Ramchandra [Final], 13 Alyth Gardens, Golders Green, N.W.11. E. M. Rice, H. W. Smith, David Beecher.

Raw: John Alfred (Leicester Coll. of Art and Tech. Sch. of Arch.), County Architect's Dept., Shire Hall, Gloucester. F. Chippindale, S. Penn Smith, G. A. Cope.

Richmond: Martin Charles Douglas (Edinburgh Coll. of Art: Sch. of Arch.), 30 South Eaton Place, S.W.1. W. H. Kinimonth, J. R. McKay, A. H. Mottram.

Riley: Joan Marian (Miss), Dip.Arch. (Nottm.) (Nottingham Sch. of Arch.), 8, Ennerdale Road, Sherwood, Nottingham. A. E. Eberlin, C. St. C. Oakes, L. Darbyshire.

Roberts: Keith Hadfield [Special Final], 17 Cawthorne Avenue, Fartown, Huddersfield. Percy Howard, E. S. Benson, George Crossley.

Rowswell: Donald, Dip.Arch (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 36 Ravenswood Crescent, West Wickham, Kent. J. S. Walkden, David Jenkin, A. D. Sayers.

Salmon: Ronald David (Arch. Assoc. (London): Sch. of Arch.), 2a, Vicarage Gardens, Kensington, W.8. Henry Elder, Arthur Korn, C. J. Epril.

Shearer: Alan Frank (Northern Poly. (London): Dept. of Arch.), 10 Maxim Road, Grange Park, N.21. T. E. Scott, Robert Atkinson, A. F. B. Anderson.

Stafford: Leonard John Alfred [Final], 37 Caxton Road, Wood Green, N.22. J. S. Walkden, David Jenkin, E. D. Mills.

Stanton: Brian James [Final], 17 Lynton Road, Heaton Moor, Stockport, Cheshire. A. Douglas Jones, Henry Elder, Edgar Sutcliffe.

Struthers: John Robertson [Special Final], 25 Hathersage Avenue, Garrowhill, Baillieston, Nr. Glasgow. T. S. Cordiner, Prof. W. J. Smith, William McCrea.

Swift: Ruth Ellingworth (Miss), Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 7 Light Lane, Coventry, Warwickshire. J. S. Walkden, David Jenkin, W. W. Fisk.

Thomas: Eleanor Barbara Jane (Miss) (Arch. Assoc. (London): Sch. of Arch.), 22 Russell Hill, Purley, Surrey. R. F. Jordan, H. G. Goddard, Arthur Korn.

Thompson: Arthur Ernest, Dip.Arch (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 164 Wickham Avenue, Cheam, Surrey. J. S. Walkden, David Jenkin, W. W. Fisk.

Timothy: Cyril Frank, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 99 Leith Mansions, Grantully Road, W.9. J. S. Walkden, David Jenkin, W. W. Fisk.

Ussner: Wilfred Richard (Arch. Assoc. (London): Sch. of Arch.), 66 Preston Hill, Kenton, Middlesex. A. R. F. Anderson, R. F. Jordan, Arthur Korn.

Vanstone: Alan [Final], 23 Ridgeway Close, Ridgeway, Newport, Mon. Lewis John, Johnson Blackett, C. F. Jones.

Ward: Harold Clifford (Leicester Coll. of Art and Tech.: Sch. of Arch.), 104 Leicester Road, Glen Hills, Blaby, Leicester. Frank Chippindale, William Keay, T. W. Haird.

Warner: John Ernest [Final], 11 Eltisley Road, Ilford, Essex. D. W. Aldred and applying for nomination by the Council under Bye-law 3 (d).

Whittenbury: June (Miss) [Final], 8 Woodside Road, Whalley Range, Manchester, 16. Cecil Stewart, C. G. Agate, W. C. Young.

Wilkinson, John (Victoria Univ., Manchester: Sch. of Arch.). 16 Walmer Green, Walmer Bridge, Nr. Preston, Lancs. Prof. R. A. Cordingley, F. L. Halliday, J. P. Nunn.

Williams: Richard Owen Gwynfor, Dip.Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 9 Tithepitshaw Lane, Warlingham, Surrey. J. S. Walkden, David Jenkin, W. W Fisk.

Williamson: John Frederick [Final], 14 Beetham Place, Layton, Blackpool, Lancs. C. H. MacKeith, Halstead Best, H. T. Jackson.

ELECTION: 6 NOVEMBER 1951

An election of candidates for membership will take place on 6 November 1951. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday 13 October 1951.

The names following the applicant's address are those of his proposers.

AS FELLOWS (3)

Clewer: Selby James (*A* 1940), Ministry of Education, Imperial Ethiopian Government; P.O. Box 1032, Addis Ababa, Ethiopia. Applying for nomination by the Council under Bye-law 3 (*d*).

Dowsey: Albert Edward (*A* 1939), Public Works Dept., Port Royal Street, Kingston, Jamaica, B.W.I.; 101 Hope Road, Liguanea, St. Andrew, Kingston. Thomas Wallis, Lieut.-Col. D. T. Wallis, and applying for nomination by the Council under Bye-law 3 (*d*);

and the following Licentiate, who is qualified under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925:

Burnett: Beni Carr Glyn, Todd Street, Alice Springs, Northern Territory, Australia; Stuart Arms Hotel, Alice Springs. H. G. Robinson, H. M. Spence, E. B. Cumine.

AS ASSOCIATES (17)

Albert: Edward, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), 502 Burleigh House, Barrack Street, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce Lewis, H. L. Roberts.

Allen: Clarence Albert, A.S.T.C. (Arch.) (Passed a qualifying Exam. approved by the R.A.I.A.), 26 O'Connell Street, Sydney, N.S.W., Australia. Colonel Alfred Spain, J. C. Fowell, E. L. Thompson.

Boyd: John (Passed a qualifying Exam. approved by the I.S.A.A.), 138 Beaconsfield Avenue, Primrose, Germiston, S. Africa. Applying for nomination by the Council under Bye-law 3 (*d*).

Capon: John Girling [Final], P.O. Box 81, Causeway, S. Rhodesia. L. F. R. Coote, C. A. Knight, F. A. Jaffray.

Christelis: Dimitri, B.Arch. (Rand) (Passed a qualifying Exam. approved by the I.S.A.A.), 22 Galway Street, Germiston, Transvaal, S. Africa. Applying for nomination by the Council under Bye-law 3 (*d*).

Clayton: Kenneth Walker (Passed a qualifying Exam. approved by the R.A.I.A.), National Bank of Australasia, University Branch, Carlton, N.3, Melbourne, Victoria, Australia. Prof. B. B. Lewis, Mrs. Hilary Lewis, P. H. Meldrum.

Clough: Richard, B.Arch. (Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), 34 Fitzhardinge Street, Wagga Wagga, N.S.W., Australia. J. C. Fowell, J. L. S. Mansfield, Bryan Westwood.

Collins: John Kempthorne (Passed a qualifying Exam. approved by the N.Z.I.A.), 18 Dorset Street, Christchurch, C.1, New Zealand. M. K.

Draffin, and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3 (*a*).

Fulford: Ronald George (Passed a qualifying Exam. approved by the I.S.A.A.), 508 United Buildings, Smith Street, Durban, S. Africa. J. W. MacGregor, Lieut.-Col. D. T. Wallis, Thomas Wallis.

Handasyde: Stewart John (Passed a qualifying Exam. approved by the R.A.I.A.), 185 Mont Albert Road, Canterbury, E.7, Melbourne, Victoria, Australia. Prof. B. B. Lewis, Mrs. Hilary Lewis, Harry Winbush.

Kotlowitz: Mailech, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), 66 Roeland Street, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce Lewis, H. L. Roberts.

Larkin: Thomas Alexander [Special Final], c/o City Engineer, P.O. Box 7, Port Elizabeth, S. Africa. F. A. Jaffray, W. D'A. Cathcart, C. A. Knight.

McCardell: Frederick (Passed a qualifying Exam. approved by the R.A.I.A.), 29 Fairway, Nedlands, Western Australia. Samuel Lipson, W. R. Laurie, J. C. Fowell.

Morrison: Roy John Eric [Special Final], c/o Messrs. Lallemand and Williams, P.O. Box 105, Kitwe, Northern Rhodesia. W. D'A. Cathcart, L. F. R. Coote, W. F. Hendry.

Poray-Swinarski: Mathew Woodrow [Final], 67 Sweetland Avenue, Apt. 4, Ottawa, Ontario, Canada. Thomas Ritchie and applying for nomination by the Council under Bye-law 3 (*d*).

Schafer: Arthur Eric, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), 502 Burleigh House, Barrack Street, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce Lewis, H. L. Roberts.

Welch: Dudley Sam (Passed a qualifying Exam. approved by the I.S.A.A.), The Firs, Chapel Road, Rosebank, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce Lewis, A. H. Honikman.

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant, or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. J. K. Chowdhury, A.M.T.P.I. [*A*] has been appointed Consulting Architect to the Government, Punjab. His address is G.H.Q. Buildings, South Block, Simla, 3 East Punjab, India, where he will be pleased to receive trade catalogues etc.

Mr. Harold G. Ellis [*A*] has resigned his position as Architect to the Hornchurch Urban District Council in order to take up the appointment of Sectional Assistant Architect to the County Architect, Essex County Council. His address is c/o Architects Department, County Hall, Chelmsford, Essex.

PRACTICES AND PARTNERSHIPS

The practice of **T. A. Fitton and Son,** 7 Chapel Walks, Manchester 2 (BLAckfriars 9930) hitherto conducted as a partnership between **Mr. Roderick A. Fitton** [*F*] and **Mr. E. Hamilton Thompson** [*A*] has now been acquired by **Mr. E. Hamilton Thompson** who will conduct it alone under the same name and at the same address. **Mr. Roderick A. Fitton** will continue to practise at Tunbridge Wells, Kent, in his own name as before.

Mr. R. J. Hurst [*F*] has taken into partnership **Mr. D. S. Pearce** [*A*]. The practice will continue under the style of **Dowton and Hurst** at the present address of 72 New Cavendish Street, London, W.1.

Mr. Peter D. Haig Mathieson [*A*] has bought the practice of the late **I. H. Salonika,** of New Rhodesia House, Stanley Avenue, Salisbury, S. Rhodesia. He will conduct both practices under the style of **Peter D. Haig Mathieson** at 1/2 Travlos House, Stanley Avenue, Salisbury, S. Rhodesia, where he will be pleased to receive trade catalogues etc.

Mr. Francis L. Prichard, A.M.T.P.I. [*A*] has now taken over the practice of the late **Lionel A. G. Prichard** and is practising under the style of **Lionel A. G. Prichard and Son** from The Gables, Moor Lane, Kirkby, Liverpool 10, and will be pleased to receive trade catalogues etc.

Mr. C. E. Robson [*A*] has terminated his partnership in the firm of **Rhodarc Group,** and since 1 February 1951 has been practising under his own name at 64 Roslin House, Baker Avenue, Salisbury, S. Rhodesia.

The partnership of **Mr. Digby L. Solomon** [*F*] and **Mr. Morris Joseph** [*F*] has been dissolved by mutual consent as from 15 May 1951. **Mr. Morris Joseph** is taking **Mr. Sidney Kaye** [*A*] into partnership and will in future practise with him under the name of **Lewis Solomon, Son and Joseph,** at 21 Bloomsbury Way, Bloomsbury Square, London, W.C.1. **Mr. Digby L. Solomon** [*F*] and **Mr. Manuel N. Castello** [*F*] will act as consultants to the firm.

Mr. J. Whalley [*A*] has resigned his appointment as Architect to the Public Works Department, Bulawayo, and has commenced practice at 33 Baxendale Street, Kumalo, Bulawayo. After 1 September 1951 his address will be Broadway House, 113 Main Street, Bulawayo, Southern Rhodesia, and he would be pleased to receive trade catalogues etc.

Messrs. Gray Young, Morton and Young, Prudential Building, 340 Lambton Quay, Wellington, New Zealand, have changed the name of the firm to **Messrs. Gray Young, Morton and Calder** [*F/A/A*], with effect from 16 May 1951. The new firm will continue to practise from the same address.

CHANGE OF ADDRESS

Mr. W. Leighton Gibbins [*A*], of 3 Northernhay Place, Exeter, announces that his office address is now 45 North Street, Exeter. His telephone number (Exeter 56748) remains unchanged.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate desires partnership in the southern half of England. Good general experience. Age 49. Single. English. Capital available. Box 48, c/o Secretary, R.I.B.A.

Associate, A.A.Dipl., in late 30's, with particular experience of large scale and industrial work, seeks junior partnership or position leading thereto, in Southern England. Box 49, c/o Secretary, R.I.B.A.

An opportunity occurs, owing to the death of a partner, for a member to purchase a share in a busy architect's and surveyor's practice in Westminster. Business outlook essential and capacity for specification writing, preparation of estimates, schedules of dilapidations and reports on buildings very desirable. Box 50, c/o Secretary, R.I.B.A.

Member with well established business on the north-west coast has immediate vacancy for experienced partner with ultimate object of his taking over the business on the gradual retirement of the advertiser. Applicants should give particulars of age and experience. Half share estimated to produce £800 per annum. Box 51, c/o Secretary, R.I.B.A.

Partnership available in long established general practice, town and country, in north-west. Both architectural and surveying experience desirable. Replies in confidence to Box 52, c/o Secretary, R.I.B.A.

Associate (36) seeks partnership or position leading thereto. Capital available. Box 53, c/o Secretary, R.I.B.A.

Old-established West of England firm has vacancy for a sixth share partnership or position leading thereto. Replies in confidence to Box 55, c/o Secretary, R.I.B.A.

Partner of provincial firm of architects wishes to enter into partnership with London practice. To spend first months divided between London and provincial offices and afterwards full time in London. The connection with the provincial office is to be retained. Box 56, c/o Secretary, R.I.B.A.

WANTED AND FOR SALE

Retired Licentiate wishes to dispose of a number of surveying and drawing instruments, all in good order. List and price on application to Box 29, c/o Secretary, R.I.B.A.

Case of hand-made drawing instruments for sale. 12 pieces, new condition. Box 54, c/o Secretary, R.I.B.A.

Urgently wanted to buy—second-hand copy of 'Design' by Percy Nobbs, now out of print. Box 57, c/o Secretary, R.I.B.A.

ACCOMMODATION

Fellow has some office accommodation to let in Kensington. Suitable for young practising member willing to give professional assistance in lieu of rent. Box 40, c/o Secretary, R.I.B.A.

Architects' Indemnity Insurance

The Architect, like other professional men, incurs certain responsibilities in the course of his work. Mistakes occur in even the most carefully conducted practice, and the Architect may find himself liable for substantial damages which he can ill afford to meet.

Professional Indemnity Insurance

is designed to give cover against all claims arising from acts of neglect, omission or error arising out of the conduct of the assured's profession, and arrangements have been made by which the maximum cover may be obtained at reasonable cost.

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The Secretary, A.B.S. Insurance Department, 66, Portland Place, London, W.1. (Tel: LANgham 5721)